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ABSTRACT

A community initiative (called ADAPT) was intended to help the workforce in European Union countries to adapt to industrial change and prepare for the information society, as well as to promote growth, employment, and the competitiveness of companies in the countries. Between 1995 and 1999, 4,000 projects were funded to transform the ways in which small firms, the organizations that support them, and workers themselves respond to industrial change. An assessment of the ADAPT initiative was structured around the six key messages suggested by the European Commission's "Memorandum on Lifelong Learning," and a study that summarized 60 case studies from the assessment centered on these key messages: the importance of basic skills, investing in human resources, improving delivery and enabling interactivity, valuing experience, more guidance and less teaching, and individual solutions for small business needs. The document contains practical solutions offered from projects in these areas. Lists of acronyms, suggestions for further reading, a project list, and a glossary of terms are included in appendixes to the report. (KC)

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Innovations in lifelong learning

Capitalising on ADAPT

Jos Janssens

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Foreword

ADAPT was the Community initiative which aimed to help the workforce adapt to industrial change and prepare for the informatica society, and to promote growth, employment and the competitiveness of companies in the European Union. Between 1995 and 1999, 4 000 projects were funded. The objective was to transform the ways in which small firms, the organisations which support them, and workers themselves, respond to industrial change. ADAPT designed and tested new ways of tackling these changes. This development work continues in projects throughout Europe.

At the end of the ADAPT Community initiative, Cedefop commissioned the selection and documentation of projects showing good practice in lifelong learning (LLL). Sixty projects were chosen mainly from phase two, 1997-99, and added to the projects database in the LLL section of the European training village (ETV), Cedefop's interactive website at the following Internet address: www.trainingvillage.gr.

The ADAPT projects demonstrate that learning at the workplace is not restricted to the act of learning itself, but that it also supports innovation and change in the company, and helps to solve recurrent problems in production or work organisation. In short, it links theory and practice. The old model, where training was designed mainly by traditional institutions, based on supply-side packages, can now usefully be replaced by one where the demand side, the customers, are at the forefront. In-company learning is no longer a stand-alone activity for trainers and teachers, but a common task for the workforce, management and human resource practitioners. ADAPT confirms in a practical way that in the emerging information society, information, innovation, knowledge management and learning must become more integrated.

This report, *Innovation in lifelong learning: capitalising on ADAPT*, provides many practice-oriented answers from selected projects to questions suggested by the European Commission's *Memorandum on Lifelong Learning* ([1]). It is structured around the six key messages of the memorandum and is a further contribution to Cedefop's work in support of the Commission's follow-up activities. A chapter is devoted to the learning region, while the theme of partnership at transnational, regional and local levels is emphasised throughout.

([1]) European Commission, Brussels, 30.10.2000, SEC(2000) 1832.

We would like to thank Jos Janssens, a consultant in human resources, who selected the projects and prepared the report. From 1995 to 2000, he coordinated the ADAPT team in Europs, which was the technical assistance office of the European Commission for the human resources community initiatives. His project knowledge and contacts made it possible to document material which might otherwise have been lost sight of when ADAPT concluded.

Stavros Stavrou
Deputy Director

Martina Ní Cheallaigh
Project manager

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I would like to thank several people who contributed to this exercise. Without their help, it would not have been possible to produce this report.

I am grateful to the ADAPT project promoters who helped document their innovative projects. I especially appreciated their openness in explaining the stages, and often the difficulties, through which their projects had gone. The results may be found in the Electronic training village (ETV), Cedefop's interactive website at the following Internet address: www.trainingvillage.gr.

I would also like to thank colleagues from the former ADAPT national support structures. Their profound knowledge of national ADAPT programme helped in selecting the good-practice projects.

Many thanks to my friends and former ADAPT and Employment colleagues Françoise Rutherford, Allen Mercer and Thomas Stahl. Françoise and Allen wrote many of the project descriptions mentioned above and with Thomas made valuable contributions to this report. Allen also edited the texts.

I would also like to thank Martina Ní Cheallaigh of Cedefop for her assistance and guidance throughout the exercise.

Jos Janssens
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Executive summary

ADAPT and lifelong learning

This report, based on good practices in lifelong learning from the ADAPT Community initiative, aims to contribute to the current debate on lifelong learning in Europe. It originated as part of a study, sponsored by Cedefop, on *Selecting, documenting and assessing projects on lifelong learning carried out under the Community initiative ADAPT*.

The ADAPT Community initiative was designed to help the workforce adapt to industrial change and to promote growth, employment and the competitiveness of companies in the European Union. Funding for the 4000 projects was committed between 1995 and 1999, jointly by the European Social Fund and EU Member States. In the second phase of ADAPT (1997-99), a further priority was added, the employment implications of the developing information society (ADAPT-BIS - ADAPT-Building the information society).

Even if more than half the 4000 projects dealt with learning, lifelong learning in itself was not the aim of the initiative. When the initiative started in 1995, the debate on lifelong learning was not well developed at EU level. However, building the information society was the priority for the second selection round (1997-99), which meant that ADAPT is to date – 2001 - the only large-scale, EU programme preparing both workers and industries for the information society

ADAPT was implemented nationally, so projects had to focus on national priorities and were selected by national authorities. These individual projects formed transnational partnerships, some between two partners while others built national networks. Most ADAPT projects also built national networks, based on industrial sectors and regional or local networks ('learning regions', see Section 8). These networks comprised various actors: authorities, chambers of commerce, social partners, research institutes, universities, training providers, regional development agencies, consultants, and, often, also companies.

The report focuses the key findings of the ADAPT projects on workplace-oriented learning and learning networks. Some of the ideas and results might contribute to the debate launched by the European Commission's *Memorandum on lifelong learning* ([2]). Suggestions are made based on project results. For easier use, these are structured according to the key messages of the Memorandum.

Learning and working

Less than ten years ago, continuing training was viewed either as a means of career progression or assistance to companies making ad hoc adaptations to new technological developments. Two factors have now revolutionised industry and business. Massive

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([2]) European Commission, Brussels, 30.10.2000, SEC(2000) 1832.

investment in information and communication technologies (ICT) and globalisation of markets have led, and continue to lead, to intense modernisation in companies.

The spread of relatively cheap ICT and increased competition have changed production methods and work organisation in large parts of the economy. New forms of organisation and associated management models have different names and are based on different concepts but rely on extensive job enlargement in vertical, horizontal and social terms with corresponding skills needs for all employees. Also, company staff are expected to be active in initiating and implementing projects to develop the enterprise. Few employees possess the necessary skills, so they have to acquire them through various learning activities. These skills must be constantly relearned, adapted and improved throughout working life.

Human resources officers in many companies try to find solutions to staffing problems reported by other departments. Mostly they focus on immediate needs, without enquiring about underlying problems. Confronted with skill shortages in the company, the HRD department tends to recruit new workers. It often forgets that it already employs workers with knowledge and experience of the company and that, with additional training, they may be able to fill some of the vacancies. ADAPT projects show how a new approach to human resources policy and to learning is profitable for both business and working people.

For companies, continuing vocational training is becoming a matter of survival. Each business is the subject of different external challenges and undergoes specific developments. For that reason, continuing training must focus on the company's needs. There is, however, a growing discrepancy between programmes offered by educational institutes and actual company needs. Changes in training provision are too slow for industry, and businesses often have no other choice than to organise continuing training in the company.

For many years ICTs were seen as a means of enriching the contents of learning packages and as new ways of delivering training. Today, it is becoming clear that ICTs are changing the model. Whereas teaching (the supply side in learning) used to control learning, now the learner (the demand side) is increasingly setting its goals, methods and processes. ICTs are changing the context of learning. Will learning remain an activity clearly distinguished from other human activities or will it become a transversal issue, linked to all activities, individual or group? Should learning be embedded in an academic culture in virtual communities or should it adapt to the specific culture of companies and industries? ADAPT projects show some new developments, but leave many questions unanswered.

In a 'learning organisation', innovation in work methods or practices provides learning opportunities to develop new competences and insights that, in turn, influence and change the way in which work is carried out. This workplace-oriented learning supports change in the company. It helps solve recurrent problems in the production or work organisation It helps employees to understand better business processes and the reasons behind company-based procedures. It introduces media which help to make information accessible and it links theory and practice. By creating an open interface between learning and working, the coproduction of

innovation results in multifaceted reciprocal challenges, cross-fertilisation and interrelated developments.

'Learning at the workplace' is always linked to an informal and often hidden learning process such as 'learning by doing'. However, initial focus is on intentional learning processes not necessarily restricted to the act of learning at the workplace. Traditional classroom methods have to be replaced by other concepts, even if use of traditional lectures seems appropriate for some topics. Learning contents must be based on the concrete learning needs of the company. In some cases, the computer used as work instrument can be a multimedia learning desk. Colleagues and supervisors can often have a role as a trainer or coach.

Traditional training carried out both in training departments of enterprises and in external training institutions focuses mainly on basic training and qualifications in 'new' knowledge, technical skills and information about new markets. Standardisation is a characteristic of this training. Its content can be delivered through worksheets, textbooks, audio-visual media and computer-based units. The traditional role of the trainer is that of classroom teacher, a producer of learning programmes and moderator or facilitator, accompanying the trainee through the process of learning. However, workplaces developing into 'learning places' reduce the role of traditional on-the-job training.

The role of middle managers is crucial. They have to become moderators and multipliers helping further training. Similarly, senior managers have to change attitudes and working practices, as a learning enterprise does not need autocratic controllers but moderators and facilitators. Environments combining work and learning require managers to be educators or trainers and trainers to be managers - nothing short of a miracle in management thinking.

Companies have to adapt to changing markets and competition; training strategies are part of the answer. Bringing learning closer to home means not only where the courses can be consumed but also making content closer to the needs of people for career development, the needs of companies and even regions. This better-tailored response boosts motivation and provides better results, compared to the one-size-for-all strategy.

Intimately linked to the 'learning organisation' concept is the issue of innovation. Companies look for newer products or renewed production processes to boost their business and benefits or simply to remain competitive and continue trading. In the industrial society, information, innovation, knowledge management and learning were separate processes. The ADAPT experiences seem to confirm that in the emerging information society, they must become more integrated.

Workplace-oriented learning supports real processes in the company. It helps solve recurrent problems in production or work organisation. It helps employees to understand better business processes and the reasons behind company-based procedures. It introduces media which help to make information accessible and it also links theory and practice.

The European Commission's Memorandum on lifelong learning

The 60 ADAPT case studies presented in this report, clustered around the key messages of the European Commission's *Memorandum on lifelong learning*, illustrate these key messages well and, to some extent, highlight specific problems.

1. The importance of basic skills

Basic skills are essential to living and working in the information society. People need to have skills for teamwork, taking responsibility and managing companies and organisations. These new needs set a new agenda for educational institutes, not only for young people but also adults, whether employed or unemployed. Cooperation between companies and training providers is essential in defining and implementing this new agenda, with the support of management, middle management and other key individuals such as shop stewards.

The following suggestions are made:

- more research on basic skills, not only from a personal and career perspective, but also from that of an industry moving into the information society;
- education systems should equip all people with skills for teamwork and management;
- cooperation between company management, shop stewards and training institutions is key in defining needs and strategies for acquiring new skills.

2. Investing in human resources

The information society demands an approach to business in which human resources can be developed instead of being merely managed. Developing human assets can mean improving profits but it requires a positive attitude towards training and lifelong learning in the company. HRD managers need to look beyond the boundaries of the company to identify suitable practices. With potential labour shortages, an investment in training for less-skilled workers should be envisaged. Upskilling experienced front-line workers can often be a more cost-effective way of filling job vacancies than recruiting and inducting new members of staff. Job rotation has proved to be an effective tool combining training of employees in a company with work experience for unemployed people. It enables companies to manage their human resources on a local or sectoral level.

The following suggestions are made:

- an effective HRM policy can detect problems before they begin to have a major adverse effect on business;
- it can be profitable to invest in existing employees acquiring new competences.
- human resources development instead of human resources management. Developing the company's human assets maximises profits;

- creating employment pools allows companies to adjust staffing to meet temporary business increase, helps avoid layoffs and enables people to adopt lifelong learning strategies.

3. ICTs improving delivery and enabling interactivity

ICTs are practical tools for the delivery of learning, but their potential impact has not been totally realised. ICTs have the potential to change the entire education system, as people will be able to learn whatever, and whenever, they want. ICTs enable people to work at their own pace, combining synchronous ([3]) and asynchronous learning ([4]). Accessibility is one new feature imported via ICTs and interactivity is the other. This will also shape new forms of learning, as different types of online group work and virtual reality can be further exploited for education and learning. Some ADAPT results will contribute to research planned in the e-learning action plan ([5]). At the same time, new learning cultures will develop, transforming learning into a joyful adventure!

The following suggestions are made:

- ICTs change more than methodologies, they also enable new learning cultures to develop;
- simulation games enable participants to gain better insights into processes and to learn from mistakes without harming the business;
- the potential impact of interactivity on simulation games for continuing training has not yet been tapped;
- the cost-efficiency of introducing e-learning is not transparent. This is largely because of inexperience and lack of comparable figures.

4. Valuing experience

Integrating learning and work adds value to experience-based learning. In this way, lifelong learning is not seen as a lifelong threat by people with poor formal education or by older workers. On the contrary, learning organisations are an important step towards innovation and continual improvement in business performance . At the same time, a learning organisation gives individuals the opportunities and motivation to develop themselves: self-learning, self-assessment and self-organisation of learning have a new meaning and are key in developing lifelong learning. Here again, a partnership approach between industry and education can help move the agenda forward. This could be supported by transversal cooperation between policy-makers and institutions belonging to separate policy fields.

([3]) Synchronous: where those taking part are connected in real time while the communication is taking place (e.g. computer conferencing or video conferencing).

([4]) Asynchronous: where those taking part are not connected in real time so that messages have to be left (e.g. e-mail, bulletin boards and voice-mail).

([5]) Communication from the European Commission to the Council and the European Parliament. Brussel 28.3.2001, COM(2001) 172 final.

The following suggestions are made:

- joint training funds and structures created by social partners provide a good opportunity for developing a partnership approach between industry and education;
- documentation on best practices in developing learning organisations should give small businesses access to knowledge, instruments and support facilities to integrate learning and working;
- integration, or at least an alignment, of innovation and lifelong learning policies is desirable from a business perspective.

5. More guidance, less teaching

The need to integrate learning and work will change the role of most actors in teaching and training and individuals from companies will become more involved in supporting learning. The HRD department will integrate more training aspects into its activities, supervisors and middle management will play a role in transfering knowledge and guiding employees, and internal and external trainers will see the content of their jobs change dramatically. They will need to work with consultants, they will play a smaller role in transfering information and knowledge but have new competences in guiding and counselling individuals, groups and companies. More experienced colleagues may also prepare for a new role in supporting new or underskilled workers in learning in the workplace.

The following suggestions are made:

- better documentation on the changing roles of in-company trainers, HRD workers and middle management, on the changing role of external trainers, coaches and guides in growing self-responsibility in companies, and on the impact of ICT on their functions, would assist in clarifying emerging patterns and innovative approaches;
- to promote the 'learning organisation' in a practical way, it would be necessary to develop experiences in different sectors of industry, to test and document them properly and to disseminate and mainstream the outcomes. It would also be necessary to develop transferable instruments and learning materials and to adopt new mainstreaming methods and techniques.

6. Tailor-made solutions that respond to individual and business needs

Bringing learning closer to the learner means promoting workplace-oriented learning. The answer to new lifelong learning educational needs will not lie in mass-produced training but in tailor-made solutions. Aligning what businesses and individual learners need, can only be guaranteed by intensive cooperation between educational institutes and industry. This means that provision must shift from a supply-side to a demand-side approach, placing the user needs at the centre.

The following suggestions are made:

- e-learning requires a more integrated policy, using cost-effective means but taking into account specific population needs.
- improved cooperation between education and industry should align training offers to respond more directly to potential customer needs.
- ICTs provide new tools for learning but they also present a challenge to companies to train employees to use them effectively.

7. Learning networks: a holistic approach

Workplace-oriented learning is a multifaceted task, involving integrating learning, working, adaptation to new technologies and fostering innovation. Different learning, counselling and support functions can only be provided by a variety of organisations and structures, at a regional level. The 'learning region' provides the framework and can mobilise all actors, including authorities and administrations, universities and research, schools and training institutes, service companies, social partner organisations and NGOs and even companies. The region is most efficient as people and organisations know each other, they have their businesses and exercise their responsibilities at local and/or regional level and so, they can make effective use of the available resources. However, sectoral networks can also play an important role in finding solutions to many problems encountered in a specific industry.

The following suggestions are made:

- the region seems to be the most promising level at which holistic strategy can be deployed;
- the involvement of universities, research institutes and training providers is crucial in creatinga learning region;
- sectoral learning networks are a solution to many problems encountered in a specific industry but they can only be built on effective partnerships.

Some suggestions for EU policy on lifelong learning

1. Promote integration of lifelong learning, employment, innovation and industrial policies

The main policy of the industrial era does not respond to the needs of the emerging information society. Policy proposals are often isolated from other policy instruments and do not take account of the points of view of other departments or interested parties. They neglect the potential impact of any proposed changes on other policy questions. However, the negotiation, assessment and benchmarking processes linked to EU employment strategy can provide a better model. The priorities for lifelong learning could be used to open up a debate about the coherence of different policies linked to lifelong learning on education and learning, innovation and industrial modernisation programmes and employment strategies and their impact. The European Commission could lead the way.

2. Stimulate synergies within EU programmes

Programmes and projects sponsored by the European Commission respond to economic and political realities, just like national initiatives. For example, programme proposals have to demonstrate that they are in line with the European employment strategy, that they support equal opportunity, prepare for the information society and promote local development. This framework contributes to a coherent strategy for the EU but the lack of effective internal consultation procedures means that it is difficult to redesign proposals, to avoid overlaps between programmes and to contribute to the creation of synergies. Given the overall importance of learning and knowledge management in the information society, a small and informal group of interested officers from different DGs could provide a permanent forum in which issues could be discussed before positions are taken.

3. Support dissemination, mainstreaming and benchmarking programmes.

EU-budget lines and work programmes normally provide considerable financial and other resources for developing innovative projects that can contribute to policy in related fields. Evaluation procedures are also included that enable the European Commission to check if public money has been used in a correct and efficient way. However, it is questionable if sufficient resources are allocated to assess programme results, not from a financial and policy viewpoint but from the user's perspective. Many innovative approaches could be disseminated more widely and have a much more significant impact. This would require the inclusion of dissemination and mainstreaming activities in all programmes together with appropriate budgetary provision and improved coordination within, and between, EU Institutions. Such developments would improve not only the efficiency but also the transparency of EU funding.

1. Introduction

This report, based upon good practices in lifelong learning from the ADAPT Community initiative, aims to contribute to the current debate on lifelong learning in Europe. It originated as a part of a study, sponsored by Cedefop, on *Selection, documentation and assessment of projects on lifelong learning carried out under the Community initiative ADAPT*.

The ADAPT Community initiative was designed to help the workforce adapt to industrial change and to promote growth, employment and the competitiveness of companies in the European Union. The funding for the 4000 projects was committed between 1995 and 1999, by both the European Social Fund and EU Member States. In the second phase of ADAPT (1997-99), an additional priority was added to the initiative, the employment implications of the development of the information society (ADAPT-BIS).

Even though more than 2000 projects concerned learning, lifelong learning itself was not the primary aim of the initiative. When the Initiative started in 1995, the debate on lifelong learning was not well developed at EU level. However, *Building the information society* was the priority for the second selection round (1997-99), so that until 2001, ADAPT was the only large scale, EU programme preparing both workers and industries for the information society.

ADAPT was implemented nationally, so projects had to focus on national priorities and were selected by national authorities. These individual projects formed transnational partnerships, some between two partners, with others creating larger national networks. References to projects in this study use the proper national name but, in some cases, the name of the transnational partnership in which the project was involved is also given.

Many ADAPT projects also constructed national networks, based upon industrial sectors and regional or local networks (see 'learning regions' in Section 8). These networks comprised a variety of actors: authorities, chambers of commerce, social partners, research institutes, universities, training providers, regional development agencies, consultants and, in many cases, companies. The successful approaches of many projects stimulated the authorities in charge of the ADAPT Initiative to use networking as an approach for mainstreaming, via national and transnational thematic groups, web sites and other instruments. These different forms of partnership have been christened 'development partnerships' and will be the main carriers for the new EQUAL human resources Community initiative.

1.1. Continuing training, a requirement for companies in the information society

Less than a decade ago, continuing training was viewed either as a means of career progression or helping companies to make ad hoc adaptations to new technological developments. Training courses were often seen as a reward or an incentive for industrious

employees, especially for those with management responsibilities. These perceptions have changed dramatically. Two factors have now revolutionised industry and business. Massive investment in information and communication technologies (ICTs) and globalisation of markets have led, and continue to lead, to profound modernisation processes in companies.

It is sometimes easy to forget how ICTs have revolutionised the world, the economy and working environments and conditions. The first personal computers were introduced into industry in the 1980s. It took some time before they became commonplace, at least in Europe. Now it is impossible to imagine business functioning without PCs. According to the benchmarking report that followed *Strategies for jobs in the information society* (6), some 45% of all workers and 73.5% of white-collar workers use a computer in their job, either at the workplace and/or at home. However, there is still an enormous lack of training and most workers have to learn to use a computer on their own. Only 22% of workers have had some form of computer training for their job.

World wide competition means that enterprises have to be prepared to adapt flexibly to every conceivable market change and to anticipate trends. To achieve this flexibility, companies adopt a double strategy:

(a) by changing the production process and the work organisation they foster innovation, introduce teamwork and horizontal networking and move to functional integration in the workplace, inter-enterprise networking and a reduction in hierarchies;

(b) by upskilling employees, workers acquire hybrid qualifications, good communication and teamworking skills.

Continuing vocational training is becoming a matter of survival for companies. Every business is subject to different external challenges and undergoes specific developments, so continuing training must be focused on individual company needs. However, there is a growing discrepancy between the programmes offered by the educational institutes and the real needs of companies.

In general, production processes have a much shorter cycle than before, as quality requirements are more important, technological developments occur more quickly and markets have become more volatile. Companies need to adapt rapidly to these changes. Training responses for individual workers, for teams or for entire departments are part of an adaptation strategy. Traditional training programmes that are built upon 'school' curricula often do not respond to the requirements of timing and the need to build upon existing competences and experiences. Nor, in a terminology fitting to industrial culture, are they output-oriented nor do they facilitate 'just-in-time learning'.

Education and training providers assume that their programmes respond to the needs of the business community but they rarely check their assumptions. Even where they do, discussions

(6) Commission Working Document SEC(2001) 2222, Brussels 7.2.2001, p 7.

with companies can sometimes be difficult. Business and education have different cultural backgrounds, different perspectives on what is required and use a different language to describe it. Businesses may not always spend the time clearly defining needs. Company management should be aware that even if the training needed for employees is not available 'off the peg', educational institutes could still develop an appropriate training response. Training providers, on the other hand, still think in programmes rather than modules and still tend to adopt the 'one-size-fits- all' approach. They need to invest more time in assessing the needs of businesses and employers, not just those of employees. They have to invest in retraining their own staff. Responses have to become quicker, as business needs a solution today for its today's problems. Training systems need continuous adjustment and development to reflect the changing realities of work, individuals and society. Meanwhile, changes in training provision are too slow for industry, and businesses often see no other choice than to organise continuing training in the company.

1.2. Workplace-oriented learning

The expression 'learning in the workplace' can be interpreted in different ways and so needs to be clarified. 'Learning in the workplace' is always linked to an informal and often hidden learning process such as 'learning by doing'. However, the initial focus is on intentional learning processes that are not necessarily restricted to the act of learning at the workplace. Traditional classroom methods have to be replaced by other concepts, even if the use of traditional lectures seems appropriate for some topics. Learning content must be based upon the concrete learning needs of the company. In some cases, the computer is an appropriate multimedia learning desk. Colleagues and supervisors can often have a role as trainer or coach. So, other terms can be used to describe this type of process such as workplace-oriented learning.

Enterprises see many benefits in investing in workplace-oriented learning as it can:

(a) reduce the time that employees are unavailable for work;

(b) reduce travel costs (travel time, transport and hotel expenses);

(c) require less investment in learning equipment (multimedia computers, Internet connections);

(d) have benefits of scale, as groups of employees can be trained from the same investment;

(e) mean shorter courses because they are tailor-made to the needs of the company and build upon existing worker competences;

(f) provide a quicker response to current needs;

(g) provide problem-solving exercises in day-to-day work situations that improve employee competences;

(h) boost the motivation of learners because they can immediately use the new skills and competences and see the effects;

(i) motivate a low-skilled workforce to adopt practical learning experiences.

However, some barriers will impede generalising the workplace as a learning place:

(a) unforeseen events such as technical problems in production or time pressure might cause workers or their supervisors to interrupt learning and revert to working;

(b) technical equipment might be good enough for work tasks but not adapted to learning requirements;

(c) business might still not be aware of the need to adopt a holistic human resources development policy.

For working people, learning embedded in work has a different flavour when compared to traditional courses:

(a) practice-oriented learning reduces learning volume to what is useful and really needed, skipping superfluous digressions;

(b) motivation grows, when the immediate results of learning are evident;

(c) workplace-oriented learning responds to practical questions and problems, ensure that courses address essential topics;

(d) it is easier for an employee to convince the employer to let him or her participate in workplace-oriented learning than it is in the case of external courses;

(e) learning in the workplace removes a number of practical problems (no loss of time for travel to the courses, no problems about having to close the business when employees undertake training...).

1.3. Learning: the driving force behind strategic changes in the company

Traditionally, training and learning needs are defined in relation to gaps between the individual's action capability and the required action competence. In reality it is not always possible to make a clear distinction between working and learning, as all people learn by doing and learning influences many of our activities.

'Learning by doing' is an age-old philosophy of learning that underpins many traditional training schemes in craft and industry. Work activities are influenced by learning and vice versa, creating a powerful interaction between the two. The implementation of a learning-by-doing strategy tends to focus only on one dimension. It is centred on learning a given task and work method, focusing on the upgrading of competences so that a person can carry out the work.

Traditional 'learning by doing' does not take into account the growing needs of industry to adapt continually to new changes. Nor does it take account of the full capacity of people to learn and to adapt to new situations through learning. Only working and learning are strongly interrelated, can a company count on improvement and innovation. The continually changing work environment demands that employees and management learn.

The new type of company, often called a 'learning organisation', is symbolised by an upward spiral. In this spiral, innovation in work methods or practices provides learning opportunities leading to the development of new competences and insights that in turn influence and change the way in which the work is carried out. Whereas traditional on-the-job training was only concerned about the learning capacity of the individual, integration of the company's work and learning processes is concerned with the learning capacity of the organisation. This requires a coherent organisational flexibility, which involves the organisation's planning systems and its managerial structures, including the human resources department.

Traditional training carried out both in the training departments of enterprises and in external training institutions focuses mainly on basic training and qualifications in relation to 'new' knowledge, technical skills and information about new markets. Standardisation is a characteristic of this type of training. Its content can be delivered through worksheets, textbooks, audio-visual media and computer-based units. The role of the trainer is that of classroom teacher, producer of learning programmes and moderator or facilitator, accompanying the trainee through the process of learning.

However, workplaces developing into 'learning places' reduce the role of traditional on-the-job training. The introduction of function-integrated workplaces, teamwork, production islands or flexible manufacturing systems, create many new possibilities and challenges for the learning capacity of the individual. These changes are not only the result of the efforts and adaptation of the individual learner. Decisions have to be taken at company level, social conflicts resolved and creative solutions found that require autonomous and systematic learning processes on the part of individual workers, facilitated by managers and the working environment. The role of middle managers is crucial. They have to become moderators and multipliers, assisting further training. Similarly, senior managers have to change attitudes and working practices, as a learning enterprise does not need autocratic controllers but moderators and facilitators. Environments combining work and learning require managers to be educators or trainers and trainers to be managers - nothing short of a miracle in management thinking.

An integrated learning workplace reduces the problem of transfer that has affected traditional training systems. External training systems ignore to a degree the specific situation in the company and/or in a particular workplace. New competences acquired by trainees may not be transferred to the workplace, because of incompatibility between the training message and the situation in which the new insights and skills should be used. For example, promoting autonomy, responsibility and participation in decision-making for frontline workers does not make much sense in a rigidly hierarchical organisation that remains unchanged. Designing learning and training in line with the real action-fields of the workplace reduces the risk of

non-application of newly acquired competences. This can also relegate external training to the role of a complementary measure that supports direct learning at the workplace.

Another reason for establishing the strategic location of learning in the workplace is its capacity to lead to innovation in work structures through direct feedback loops. This report addresses the relationship between innovation and learning in the workplace and the question of self-learning as a key qualification. Without this competence, there can be no effective learning in the workplace. The responsibility for the success or failure of workplace-oriented learning depends to a large extent on the learner, whereas the complementary actions of managers and trainers can only support the learning process.

The concept of the 'learning organisation' is sometimes reduced to either 'the organisation that learns' or 'the qualifying organisation'. According to Franz ([7]), the organisation of the company and of work is, at the same time, the organisation of learning. Moreover, it should be understood as a process by which the organisation reacts to, and enables people to respond to, new challenges arising from a rapidly and constantly changing environment including changes in markets, technologies, ecological conditions and constraints and values. Franz identifies six dimensions that are central to a learning organisation. These are customer orientation, improvement, learning, participation, decision-making and appropriation processes. They are, at the same time, objectives and ways of achieving them, the product and the process of producing it.

Workplace-oriented learning supports real processes in the company. It helps to solve recurrent problems in production or work organisation, it helps employees to understand the business better and the reasons behind company-based procedures, it introduces media which help to make information accessible, and it links theory and practice.

1.4. Combining work and learning functions as a source of innovation for the company

The management culture that brings continuing training closer to the workplace and fosters integration of learning and work sees cost-efficiency and the elimination of problems linked to the transfer of knowledge to practice as decisive factors. Recent research on the genesis of innovation emphasises the role of the interface between different reference systems. Learning and working are such systems but to date the links between the two have not been well developed. By creating an open interface between learning and working, the co-production of innovation results in multifaceted reciprocal challenges, cross-fertilisation and interrelated developments. Learning will no longer be associated with traditional schoolroom didactics

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([7]) Franz, H.W. *Qualitätsarbeit braucht Arbeitsqualität. Handbuch Einführung von Qualitätsgewährleistung und Gruppenarbeit in einem Zuge*. Landesinstitut Sozialforschungsstelle Dortmund, Series 'Beiträge aus der Forschung' No 105, Dortmund: Landesinstitut Sozialforschungsstelle Dortmund, 1998.

and will have room for entirely new methods, media and concepts. A similar process will happen in the workplace. Jobs will be constantly re-thought in response to learning and their forms, methods and organisation will be continuously adapted to changing market requirements. This could generate new product ideas and new forms of production.

1.5. New patterns for lifelong learning and continuing training on the shop floor

This report focuses on some of the contributions of ADAPT projects that have developed new concepts and strategies. Many of these new concepts are only at an early stage and need further development and testing. However, even while they may not have been fully operationalised or embedded in holistic strategy, they have an added value for other institutions and for companies in the field. Interested parties will find inspiration for their own work, their own ideas, their solutions and even their products. The report is essentially practice-based and is only concerned with definitions or strategies when these are necessary to clarify and explain its focus.

Perhaps one clarification is needed from the start. Contrary to many other programmes, that begin at the level of individual learners and are mostly sponsored by educational institutions, the focus is on the learner in the context of companies and industries. 'People themselves are the leading actors of knowledge societies', as the European Commission's *Memorandum on lifelong learning* ([8]) points out. This is confirmed by the way that employees and management of companies acted within the framework of ADAPT projects. They were, and are, taking their lives and careers in their own hands, without waiting for external bodies or structures to take initiative.

But there is also a clear context: that of the need for changes in the company. This new perspective was supported by the ADAPT initiative through its specific objective of helping both employers and workers to anticipate industrial change and deal with its effects. The second reason for this choice of perspective stems from practice rather than from a difference in objectives. For intellectual and policy reasons, it is quite useful to divide a report into different sections. However, it is difficult to isolate one factor, such as guidance and counselling, from others such as the role of teachers and trainers or the use of ICT: reality is transversal.

The report focuses on the key findings of the ADAPT projects on workplace-oriented learning and learning networks. Some of the ideas and results of projects might contribute to the debate launched by the European Commission's *Memorandum on lifelong learning*. For that reason, a number of projects have been clustered around the key messages of the memorandum, namely:

([8]) European Commission, Brussels, 30.10.2000, SEC(2000) 1832.

(a) new basic skills for all;

(b) more investment in human resources;

(c) innovation in teaching and learning;

(d) valuing learning;

(e) rethinking guidance and counselling;

(f) bringing learning closer to home.

Section 8 focuses on learning networks. Networking was one of the main instruments used in ADAPT. Examples of this activity include transnational partnerships, networks based on industrial sectors and regional or local networks (learning regions) put in place by authorities, chambers of commerce or other key actors. The learning networks from ADAPT are a concrete illustration of partnerships needed for lifelong and lifewide learning, as highlighted in the memorandum.

The contributions of the ADAPT projects only deal with a few aspects of each of these themes and the content of this report should not be regarded as an in-depth study.

2. New basic skills for all

The Lisbon European Council (9) lists the following 'new' basic skills: IT skills, foreign languages, technological culture, entrepreneurship and social skills. The traditional basic skills of literacy and numeracy are not included in this list, although it is impossible to imagine a person being able to function in the information society without being able to read, write and count. The European Commission's *Memorandum on lifelong learning* defines new basic skills in a broader sense. They are the skills required for active participation in the knowledge society and economy, in the labour market and at work, in real-time and in virtual communities, and in a democracy. They are also skills necessary to be a person with a coherent sense of identity and direction in life.

The massive spread of relatively cheap ICTs and increased competition have changed production methods and work organisation in large parts of the economy. These new forms of organisation and associated management models have different names and are based on different concepts. They include learning enterprise, fractal enterprise, lean management and anthropocentric work organisation. Nevertheless, they all rely on extensive job enlargement in vertical, horizontal and social terms with corresponding skills requirements for all employees. Moreover, the company staff is expected to play an active role in initiating and implementing projects for the development of the enterprise. Few employees possess all the necessary skills, so they have to acquire them through various learning activities and these skills must be constantly relearned, adapted and improved throughout working life.

ADAPT projects started from the concrete needs of business and this section hopes to contribute to the debate on basic skills by highlighting some of their findings. Strikingly, literacy and numeracy are often seen only from a perspective outside work situations. Training institutions or employment services specialising in literacy focus mainly on target groups that have difficulties in getting a job because they have lost their reading and writing competences or because they emigrated from countries where other alphabets or languages are used. But people who have difficulties in reading and writing also bring these problems with them into the workplace. Their deficiency is a potential source of communication and functional problems in the company that employs them. Language skills are also crucial for companies operating in a context of a European single market and increased competition. However, few training providers respond to the specific needs of business. The report does not address the topic of digital literacy, which is important for production industries, services and administrations. Nearly all ADAPT projects from the second call *Building the information society* dealt with this subject in one way or another. Consideration of this topic would require another in-depth research study. Nevertheless, some related aspects are covered in the Section 4 of this report, especially the question of how vocational training organisations are introducing and using ICTs.

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(9) European Council Presidency Conclusions at the Lisbon Summit (23-24 March 2000), http://ue.eu.int/en/Info/eurocouncil/index.htm

This section explores entrepreneurial and social skills. Nearly every person will acknowledge that entrepreneurial skills release capacities to improve individual job performance, to diversify company activities and to contribute to job creation and self-employment. However, what exactly are these skills and to what extent do they and social skills vary? The European Commission's memorandum identifies a number of social skills including self-confidence, self-direction and risk-taking. Other examples, built on experience from ADAPT projects, include the ability to function in a team, sharing values and a vision, interpersonal skills, problem solving capacities, a client-oriented attitude, polyvalence and skills that are transferable to other companies and jobs. Perhaps the most important skill is learning how to learn, which is the ability to learn and acquire new skills rapidly and to adapt to new challenges and situations. This skill has become a basic requirement for most companies and industries.

2.1. Literacy and numeracy

Basic skills are often equated with the skills of literacy and numeracy. Illiteracy remains a problem in Europe. Almost everyone has the opportunity to develop the ability to read and write and to use mathematics at the level needed to function at work and in society. In some instances the opportunity has not been taken and in others people have lost these skills because they have not practised them after leaving school. Often social problems are related to poor basic skills and illiteracy has implications for the nation's economic growth and productivity, for the individual's employment status and earnings and for the companies that employ them. The question of poor literacy is made more urgent when skill shortages are apparent.

The rapid change in the nature of employment has made reading and writing even more essential for all workers, including those in low-skilled jobs. The problem is exacerbated by the introduction of information technologies, changes in work organisation and quality assurance systems. The extent of the problems and their impact on a company are largely underestimated. For example, workers with deficiencies in reading and writing cannot participate in most training programmes or learn to use ICTs. Such workers cannot understand written instructions or cannot report problems to supervisors or to the next shift. People who have never reached 'adequate' levels of literacy and numeracy often feel ashamed. They are unwilling to seek help and instead try to disguise their difficulties. They are trapped in a f vicious circle and the real extent of the problem will remain hidden without external intervention.

The Basic Skills Agency, the national agency for basic skills in England and Wales, has developed the **Basic skills improvement kit**. This is an ICT based learning programme, which was tested in two pilot programmes where ICT could make a difference. The first programme developed materials especially for prison training on the topics of catering and fitness. The second pilot was developed together with Unison, a major trade union, and enabled residential care workers to combine vocational training with learning in basic skills.

In the first case, adapting to the specific circumstances was the main challenge for the project; in the second, the support from the trade union representatives was decisive in its success.

Reading and writing, a Danish ADAPT project, focused on overcoming company and individual barriers to solving reading and writing problems. Company management was surprised to discover that reading and writing problems were at the root of difficulties in involving workers in lifelong learning programmes that had been set up to accompany work reorganisation or to obtain a quality certificate. Recognition of the problem was the essential first step. Then key actors were made more aware of the problems and potential solutions, which led to the development of a course for shop stewards. This supported the activities to be undertaken in companies. In each participating company, a broad training needs analysis identified the dimension of the problem in the context of the company's lifelong learning strategy. From this, reading and writing programmes were designed to meet the needs of the company and the employees and to support the transfer of new competences from learning situations to work situations.

Reading and writing in the information society, the Dutch transnational partner of the above project contributed by adapting *Nederlands op de werkvloer* (Dutch at plant level) ([10]). This was a language teaching methodology, developed for migrant workers in the Netherlands, that aimed to provide the language skills necessary for carrying out daily work in a company. This methodology had to be adapted to the specific situation of indigenous people who had lost their reading and writing skills over the years. The methodology was also adapted to the particular needs of the SMEs involved. Management, foremen, shop stewards and the target public were approached for their views, together with others in the factory such as colleagues, people employed in the human resources department and canteen attendants. The specific terminology of the company was the basis for curriculum content. This included technical terms and also expressions used in the information provided by the Works' Councils.

The **Reading and writing** partnership reviewed the perception of reading and writing difficulties and the response of the public authorities in the Member States. These are all quite different in terms of courses and programmes and also the role of the trade unions. Whereas in Denmark and Sweden, local trade union officers and the shop stewards play an important direct role, Dutch trade union officers restrict themselves to general statements and involvement in collective agreements on aspects related to continuing training. In France, the management and financing of bipartite structures for continuing training seems to be the main activity and shop stewards are not involved directly in literacy and numeracy programmes.

([10]) More information on *Nederlands op de werkvloer* can be obtained at *ITTA, Instituut voor Taalonderzoek en Taalonderwijs Anderstaligen* (institute for language research and language teaching for people with foreign language background), an institute at the University of Amsterdam, functioning as a resource center for authorities, business, education and public employment services concerning the use of Dutch as second language. Address: *Instituut voor Taalonderzoek en Taalonderwijs Anderstaligen (ITTA)*, Herengracht 514, 1017 CC Amsterdam, website: http://www.itta.uva.nl/index.html

In general, there appear to be two important barriers to increased or better provision of training in reading and writing. The significance of these problems is rarely recognised by companies and, even if there is some recognition, the cost to the company in money and time lost to production is often seen to be too high. The question is whether more intensive cooperation between social partners, authorities and training providers might change this? In the Danish and Swedish projects, some progress on this issue could be reported thanks to the active role of the trade unions involved, but at national level the question remains unsolved. The second problem, which is that of the lack of flexible training delivery, might be easier to solve, if providers moved away from their supply-oriented approach and organised more flexible courses as a response to pressures on the workers such as shift- and overtime-work and family responsibilities.

2.2. Language skills

Language skills are an asset for the staff of companies doing business with clients from abroad, such as air carriers and those in the tourist industry. For example, in the **TIDE** project (*Technologie de l'information et développement de l'emploi* - Information technology and job development), the French national airline company Air France developed *Boarding Pass*, which is a self-study package on CD-ROM for English language training developed for its sales staff. The same need applies to **EU JobRotation - A new track in Europe** was developed by Arcidonna in Sicily, where foreign languages were included in staff training, and learning was supported by some transnational placements. However, many other company-related projects demonstrated the need for language skills in other sectors, even when staff might have less direct contact with foreign customers. An example of this is the Austrian ADAPT project ***Cluster Netz*** (Cluster net) for SMEs in the automotive supply sector. Technical English skills were seen as a necessity for many functions as orders, technical specifications and other papers often come in English and staff had to deal with these documents in the original language.

It appears that when companies support the development of language skills, they want practical knowledge and understanding that can be applied immediately by their staff. The question is whether they can find appropriate courses locally or self-study packages that meet their needs. It would be interesting to review the methods used by training providers or developers of CBT-packages to determine the needs of their potential clients. The method used by the **Reading and writing in the information society** project to identify the words needed in a company specific vocabulary was a series of interviews with people at all levels in the company. While it might be applied in specific cases, this method may not be cost-effective for the majority of companies and industrial sectors.

2.3. Social skills

Literacy and numeracy are only two of the basic skills needed to function in society, especially to become and stay employable. Social skills such as self-confidence and risk-taking are equally important to people throughout their life, because they are increasingly expected to take responsibility for their own lives and to function more autonomously than before. Industry, moving to new forms of work organisation, increasingly depends on these social skills. These skills include communication, problem solving, creativity and teamwork. However, there can be problems about a common definition or understanding of these types of skills. Companies and other actors define competences in relation to a specific working place, a particular product or a certain company, but teamwork requires skills that are usable and transferable to other jobs and other companies. In the case of companies undergoing downsizing, it is especially crucial that those skills are identified.

The Swedish project **JTE-Skills**, from the ADAPT partnership *Job Transfer Europe*, developed a practical method and instruments for describing and analysing 'social competences'. For them, social skills are those that are transferable between workplaces. The project included functional skills, problem-solving skills, prioritising skills, communication and contact skills, organisational skills, quality work skills and environmental skills. A systematic competence assessment was carried out involving all members of personnel. After being interviewed, each person received oral and written feedback including a systematic, in-depth description of his/her competences. This analysis was used to discuss the needs of the workers in terms of lifelong learning, motivation, personal responsibility for active job search and future options for skill development. The company received a skills profile, used for analysing options for learning at the workplace in the company or at other sites. An essential part of the project was its process-oriented way of implementing tools for life-long learning as organisational change 'begins in the mind'.

Many skills are not learned in formal school courses but acquired throughout life. However, some projects document approaches where the desired skills were acquired through appropriating training modules, combining the acquisition of new insights and new attitudes. For example, the **TIDE** project (Air France) organised training in public relations and service to clients, covering skills and attitudes for employees who have contact with clients. These competences are vital to the delivery of a high quality service to customers. The training package combined classroom learning with technological support including a CD-ROM for self-study and accompanying video modules. The fact that all employees working with customers have participated in such a course improved the quality of service, customer satisfaction and, ultimately, the business results of the company.

A similar approach was used by the Italian ADAPT project ***Sentieri di carriera per il personale produttivo: sviluppo e certificazione delle competenze alla parmalat*** (Career progress for production personnel: development and certification of competence at Parmalat). New work organisation in the company required a more polyvalent workforce with enhanced skills in problem-solving, quality assurance and management. The project introduced a

flexible training process to enhance the professional capacity of the workers and their ongoing integration into the rapid development of the firm. People were offered a personalised choice of training modules, after an initial non-compulsory assessment. Even if they varied in experience and qualification levels, workers were able to progress along three 'steps' related to problem-solving ability, quality assurance and management skills.

Self-responsibility and communication are basic skills needed for teamwork. These skills are intimately linked to the personal development and the ability of an individual to change the way he or she relates to others at work or in his/her private life. People need help to understand the difference in logic between autonomous teams and the classical hierarchical work organisation that has prevailed throughout their working life. The French ***Équipes autonomes: innovation organisationnelle et preservation de l'emploi*** (Autonomous teams: organisational innovation and preservation of employment) has developed tools and a simulation game supporting the change to team work. The Belgian project **Teamspirit** had almost the same objectives and also used a simulation game. More details on these simulation games are included in Section 4.

Group dynamics and communication are essential to change and collective learning provides the framework for personal improvement. According to the **Enterprise of the learning organisation in the Apulian SMEs** project, shared values, a shared vision, an atmosphere that promotes mutual help and interpersonal skills are the keys to change in a company's culture. The project imported a number of learning techniques from the theatre to help people become aware of their body and feelings. Other tools were used to improve interpersonal skills and to create an atmosphere for good communication and exchange.

2.4. Management skills

The survival of companies depends largely on the extent to which managers and entrepreneurs are trained and retrained to cope with new challenges. Two thirds of companies in the EU are small or medium sized businesses and there are also numerous unexplored possibilities for the creation of new services. Therefore, many ADAPT projects focused on the training of managers in SMEs. These projects mostly concentrated on technical and managerial knowledge for a specific range of businesses and not necessarily the transversal skills needed by managers.

The question of how to define management skills is beyond the scope of this report but implies the skills indispensable for leading a group, such as managing people, communicating orally and making presentations, writing notes and delegating. Other skills seem to be more linked to the achievement of a goal such as project planning and management, time management, quality assurance, reporting and knowledge management. One of the partners from **JTE-Skills**, the *Leap 2000* project talks about 'leadership' rather than management skills. It identifies three different groups of skills or abilities:

(a) behaviour (focusing on key issues, communication, developing trust, respect and caring and prioritising);

(b) personal characteristics (self confidence, empowerment and vision span);

(c) building organisational culture (managing change, achieving goals, coordinating teamwork and engendering a shared culture).

One important observation is that if 'management skills' are the basic skills needed for a manager to perform his/her job, then most of these skills belong to the group of 'social skills'. In companies with a flat hierarchy and a more autonomous workforce, many people carry out tasks and take responsibilities that in classical Tayloristic organisation would be seen as 'managerial' tasks.

These management skills are essential for enhancing the company's potential to change working methods and deliver better quality services and products. Not all those with line responsibility in a company necessarily possess these skills and failing to recognise this fact might lead to strategies that fail. For example, the Belgian ADAPT project **Teamspirit** prepared for a fundamental change in production, from a classical car production line to a team-based structure. When the project had already reached the implementation stage, a screening of all supervisors within the company indicated that many first-line managers lacked either the social or professional skills to play the desired role in the animation of teamwork. As a result of this situation, teamwork could only be implemented to a much lesser extent than had been expected.

The fact that management skills are needed by more than the managers in a firm has been demonstrated by the German ADAPT project **Dolores (Dortmund logistics review and education system)**. It produced a simulation game that aimed to transfer knowledge about logistics in a transparent, visual and practical way. It targeted employees, unlike most simulation games that tend to be created for those at managerial level. The game combines the transfer of professional knowledge with training in social skills. It enables players to 'learn by doing'. However, since the player has to learn to understand processes and procedures and the potential result of decisions, he/she is given the role of warehouse manager who operates in the fields of processing and follow up of orders, the organisation of the warehouse, staffing and technology.

So, in essence, managerial skills are social skills. Perhaps the only difference is the degree of anticipation. For example, the British project **METRO - Making employment the real objective** - aimed to establish an entrepreneurial culture in an area dependant on declining industry. One of the key questions was how to solve problems stemming from internal dysfunction in production, the company structure, or in a staff performance. The project focused on effective guidance procedures and mentoring for struggling companies, combining this with new forms of entry into learning. For example, informal information and guidance methods installed in shopping centres and near work places were very successful in recruiting new learners and identifying companies contemplating redundancies. In the arts sector, technophobia was overcome through the use of ICT that was initially linked to artistic activity

and then gradually transferred to occupational activities. Managers fostered a more holistic focus on company competitiveness and solved problems more in the context of company and employee potentials, thus embracing support and teamwork.

2.5. Some suggestions on new basic skills

It is important to consider which skills are needed, not only from a personal and career perspective, but also from that of an industry moving into the information society. In this respect, there is much more research that could be undertaken. Training providers will have to acquire more practical experience of how people can be trained to acquire these skills.

Perhaps the terminology 'new basic skills' is misleading, as it is not the skills that are new but the context in which they occur. People, business and society now expect all citizens to acquire skills that formerly were not needed by everybody. This is demonstrated by the observation on management skills. Education systems in most Member States should be involved in these discussions if future generations are to be properly prepared for teamwork, for taking responsibility, for managing companies and for playing an active role in their communities.

Cooperation between companies, shop stewards and training institutions is a key element in starting a process of defining needs and strategies for the acquisition of new skills. Such cooperation leads to a better understanding of different perspectives and helps to create an atmosphere of trust and support. People in a company that is proposing to restructure can feel insecure unless they have tangible backing and support. This insecurity is likely to hamper change and training, especially in the case of lower-skilled workers. The role of a company's central management is vital in kick-starting such processes. Without the evident support of management, it is practically impossible to introduce inclusive, far-reaching changes in work organisation and the related learning.

3. More investment in human resources

Here the key issue is the innovative ways in which authorities, industries and social partners can build a new framework for continuing learning. A series of investment incentives for various stakeholders are mentioned in the Memorandum, including taxation regimes, learning accounts, rights to subsidised study leave, framework agreements on lifelong learning and setting targets for continuing training.

The ADAPT Initiative was certainly not designed to change policy settings on lifelong learning in EU Member States but some ADAPT experiences document interesting new approaches to HRD at company level, which might contribute to the policy debate. In particular, there are contributions in the field of older and low skilled workers and in innovative approaches to human resources in companies. A second section deals with approaches that seek solutions applicable to more than one company. Of these, the job rotation approach is perhaps the best known and best documented. This concept was imported from Denmark and developed and adapted to different national and sectoral settings. Job rotation can help to resource continuing training in companies by providing suitably skilled replacement workers for in-company trainees. At the start of job rotation, policy makers were looking to the use of the methodology to activate unemployed people, giving them the opportunity to gain working practice in a company. The benefit to the company of having a substitute to replace an employee going on to further qualification was seen as a side effect, as it was for the employee who was given this new opportunity for study leave.

External evaluations concluded that to guarantee the success of job rotation, it should focus on the needs of enterprises and their employees. This helps to ensure genuine participation by companies and a demand for a substitute labour force based upon real needs. It is also now recognised that job rotation is a most effective way of promoting lifelong learning in companies. Improving the employability of the unemployed should be seen as a positive side effect. Every Member State except Spain, Ireland and Luxembourg had at least one of the 30 job rotation projects funded by ADAPT. The results in terms of the training of employees and substitutes were extremely positive. Employers have used job rotation as an effective mechanism for recruiting and stabilising their pool of potential employees. They have also prevented bottlenecks by training employees and their unemployed substitutes in skills that are in demand in the labour market. Employees released for training have improved their skills and are in a better position to help their companies cope with change.

The job rotation projects clearly had an impact. Germany, Denmark, Sweden, Belgium, Finland and Portugal mentioned job rotation in their national employment action plans for the year 2000. It was successful in inspiring changes in national legislation in Germany and Portugal. Job rotation was also selected many times as a model of good practice including its use by the DG Employment and the European Commission's *Memorandum on lifelong learning*.

Only a few job rotation projects are highlighted in this section. The Berlin **Jobrotation** project helped to convince the authorities that the approach could work in Germany and, as a result, new projects started in all the German *Länder*. Education is the responsibility of the *Länder* authorities and not the Federal Government. The project **EU JobRotation - A new track in Europe** in Sicily, combined aspects of regional development and a sectoral approach in the tourism sector. Further information on job rotation is available on its partnership web site ([11]).

3.1. Human resources policy at company level

Human resources managers in many companies try to find solutions to staffing problems reported by other departments, which are normally signalled by middle management. These officers tend to focus on the immediate needs, without enquiring about any underlying problems. Confronted with skill shortages in the company, the HRD department tends to recruit new workers. It often forgets that it employs workers at the base of the organisation who have knowledge and experience of the company and that, with additional training, they may be able to fill some of the vacant jobs.

Many older employees are unskilled or semi-skilled and are often the first victims of collective redundancies when companies are restructured. They are a very vulnerable group in labour market terms but continuing employment can almost be guaranteed if they are able to master new information technologies and develop expertise in their own job situation. Such employees, recruited in a different era, may have limited educational qualifications but nonetheless possess a wide range of on-the-job learning experience.

People develop their skills throughout life, not only in work-based experiences. Sometimes workers with few educational qualifications take on roles and use competences in their local communities that they are not expected to show at work. How can they develop these skills and make this process profitable for the company? The Flemish project ***Human resources management voor laaggekwalificeerde Werknemers*** (Human resources management for operators) coached members of the HRD department of a large company and helped them to develop appropriate training approaches. The role of middle management in the company was crucial in supporting and coaching people in their learning and in creating a framework in which the 'trainees' were allowed to integrate the outcomes of their training into their daily working practices. This prompted reflection about the training and introduction of production workers in the company. Front-line workers are at the core of the company's business activity and it is vital that changes in the organisation of the company start at their level. So, why should managers have a long induction period in the company, when manual workers sometimes receive no more than a day?

([11]) EU JobRotation International Association, web site: http://www.eujob.dk. [cited 5.11.2001]

Often a company's HRM policy is not geared to low-skilled workers and needs to be adapted. Additional training for older workers does not necessarily imply greater investment than that required for the induction of new recruits to the company. A similar logic seems to regulate recruitment policy. Success in recruitment interviews is normally based on communication skills, which often means that candidates with lesser linguistic but good practical skills that would be useful in the job are not selected. A better and fairer result could be obtained by adding some form of practical test or assessment.

Training programmes should highlight the specific needs of low-skilled and older workers. For example, it might be necessary to make amendments to ensure that sight and hearing difficulties can easily be overcome. Furthermore, programmes should related as closely as possible to the normal job tasks and the work environment of the students. However, the main task of the training providers and company management is to guide and support less-qualified workers to overcome learning blockages and gain confidence, self-esteem and motivation.

Some experiences indicate the value of emphasising and recognising work-based experiences (see also Section 5 on valuing learning). Knowledge equals formally acquired competences, according to the model promoted up to a few years ago. At the same time, manual work is being replaced by process control, which creates a distance between the worker and the machine or the process. Also, as staff numbers are reduced to a minimum and time pressure increases, transfer of informal knowledge is much more difficult than before.

However, experience-based knowledge is still important for many companies, and this is demonstrated by the Austrian ADAPT project ***Arbeit in der automatisierten Produktion*** (work in automated production). The project researched the knowledge, skills and experience needed for each job in a number of companies with automated production. It appeared that many requirements could be identified that were easy to describe, but for the vast majority of these, no formal methods of qualification could be cited. The requirements were:

(a) complete and detailed knowledge of the production process and the machines;

(b) insight into the production processes, understanding production flows and the ways of regulating them (formal qualification);

(c) quick reactions and keeping cool under stress;

(d) working together and being able to count on each other;

(e) using all the senses of sight, hearing, smell, taste and touch to anticipate problems in the process and to ensure the optimum quality of products;

(f) associative thinking such as linking the data on the computer screen to the realities of the process;

(g) a relationship with the machine and feeling responsible for it.

Whereas these requirements seemed very important in the interviews, they were neglected in human resources policies and in training plans.

The Irish ADAPT project, **Learning to keep ahead of change**, has shown how older, traditionally trained workers can be motivated to acquire new skills. The HR department of a traditional manufacturing industry – a brewery - staged the project. During the previous 12 years there had been major investment in automated plant, which has had a significant impact on the nature of the work. Older workers, recruited in a period where manual work was more important, had difficulties in adapting to changes in the workplace. The first step was to equip the workforce with the skills to learn. Only after these had been acquired, could they start problem-solving and teamwork training, which led to continuous improvements at work.

The Finnish **45+** project also developed a methodology to assess the training needs of older people in relation to ICTs in SMEs. After this, the project started to motivate people and to train them in the use of information technologies through open and distance learning. The training method paid particular attention to the conditions that facilitate learning for an older age group including motivation, self-esteem and the use of existing knowledge. Training was seen as a part of normal work, so the results of the training could be applied immediately and used to carry out the required day-to-day work. The project supported participants through individual learning plans, regular feedback from assessments and a step-by-step programme of study. The results show how this approach can help people aged 45 and over to stay employable, work longer and maximise their chances of making productive use of past work experience.

The Belgian **Age-conscious training policy**, a transnational partner of the **45+** project, started from earlier research in the Antwerp metal industry that proved that older people have the potential to learn and that this increases with practice. So, increasing learning opportunities for older workers remains a worthwhile investment. These can most profitably be built on the competences that these workers have already acquired during their former jobs. A pre-condition is that competences have to be recognised and validated by drawing up a 'progress and skills assessment mechanism'. The project imported the French ROME concept (*Répertoire opérationnel des métiers et emplois*, a progress and skills assessment mechanism and classification system used by the French labour market institution ANPE), and adapted it to the requirements of the Belgian labour market. The promoter also established a register of vacancies, in order to enable brokerage by the labour agency.

3.2. Human resources in a inter-company perspective

The job rotation model has been applied and adapted very successfully in Germany. The Berlin SPI adapted the methodology of the Danish job rotation model and developed new tools in its own project. The flexibility and the adaptability of the tools are crucial to its success. It sees human resources in a larger context than that of a single company. The minimum level is a local partnership, where the company/companies cooperate with training providers and labour market offices. However, often a more sectoral approach is needed, in order to be able to meet concrete needs.

Job rotation schemes have created a win-win situation in the labour market. Employees improve their qualifications through additional training and increase both their job security and their overall employability for the future, while unemployed people improve their qualifications, gain some first-hand job experience in a company and thus increase their potential in the labour market. At the same time, companies can provide their employees with supplementary training while the substitutes ensure that production is unaffected.

The mainstreaming of job rotation in Germany has been supported by a change in national policy. An amendment to the social legislation (SGB III) made it possible for companies to use unemployed people as substitutes for employees in training, with effect from the beginning of 1998. Walter Riester, the German Federal Minister for Labour and Social Affairs, spoke of job rotation as being 'a very promising, new instrument for labour market and employment policy'. Job rotation has been an interesting example of the dissemination and mainstreaming of good practice. A combination of bottom-up experiments focusing on innovative approaches in SMEs and micro-companies, the support of the German ADAPT office and the creation of a national umbrella organisation (*Jobrotation Verein*) made the network sustainable. The Federal Minister of Labour expects the job rotation model to contribute to the creation of 250,000 new jobs.

The Danish **ELAN (European local area network)** project based its approach on creating small, target-oriented networks. For example, the local hospital was looking to upgrade personnel in its service functions in order to provide a better quality of service. The promoter brought together the hospital, the municipality, two trade unions and the employment service. They set out to define a new job profile, combining cleaning and portering. Using job rotation, newly recruited employees followed a qualifying training programme while other employees attended an upgrading course. Similar approaches have been developed for other sectors.

The job rotation project of Arcidonna in Sicily has developed the job rotation concept to accommodate the pattern of seasonal work in tourism and the needs of the tourism sector to improve competitiveness. Existing hotel employees were trained in subjects such as foreign languages, ICT, customer service, front-desk tasks and cuisine. After the training, employees were given relevant work experience abroad. Temporary replacements for these employees had previously been unemployed and were given induction training. The local project was quickly extended to the entire region. Companies could thus rely on better-trained, permanent members of staff who were more efficient and client-oriented. In the longer term, having better-qualified staff enabled them to aim for new markets such as business and luxury tourism, which is less dependent on seasonal influences and, in turn, creates more permanent and stable jobs. This example demonstrates how a tool developed as labour market mechanism for the insertion of unemployed people has evolved into a lifelong learning model to develop human resources on a regional basis, in a specific industrial sector.

Other approaches not built upon job rotation have also shown that networking on a regional basis and combining economic objectives with qualification and learning for the workforce is

a good strategy. It helps business to deal with human resources needs on a larger scale and removes some of the barriers that companies cannot overcome on an individual basis.

For example, many small businesses suffer from periods when orders are far below expectations and operating and salary costs become too high to bear. Alternatively, there may be times when the company's capacity is not high enough to cope with demand from the market. So, where can skilled workers be hired at short notice, and preferably in the neighbourhood of the company? One of the solutions tested by the project *Profilierung des Grossraumes Graz zur 'Lernenden Region'* (hereafter referred to as **Learning Region Graz**) was to build upon synergies in a large regional network. It constructed a company-based, regionally integrated, knowledge intensive network which exploited the endogenous potential of the region to achieve 'competitive advantages' for companies, existing networks and regional actors such as authorities, social partners and the university. The project created a pool of employees to act as a buffer. The regional actors, together with the network companies, analysed the needs and developed qualification standards and job descriptions for this pool. At the same time, it was possible for long-term unemployed people to join the pool and to be reintegrated into the primary labour market in the medium-term.

More information on this can be found in Section 8, Learning networks.

3.3. Some suggestions on investment in human resources

A proactive HRM policy is rewarding for a company. Too often a solution is sought only after problems have been become very evident. Front-line workers were often recruited in a different era, when new technology was not in use and when their task was based primarily upon executing orders. However, their experience can be invaluable to the company. Newly recruited workers might have more school-based competences but lack concrete work-based experience. A proactive HRM policy can detect problems before they begin to have a major adverse effect on business and can propose actions to upskill members of the existing workforce, retaining their work-based experience and using it as an asset for the company. It is rewarding for the individual employees to see their learning efforts valued by the company.

It can be profitable to invest in the acquisition of new competences by existing employees. New recruits have to be trained on-the-job, and it will be some time before they gain enough experience to become profitable for the company. However, there are relatively few examples of training less-skilled workers and of maximising their experience-based knowledge and every effort should be made to promote these approaches.

The task of human resources departments has normally been seen as providing the right number and quality of workers for production. In the information society, knowledge - and this means people and workers - is the prime asset of businesses. Instead of human resources management, the task becomes one of human resources development. It is by developing the company's human assets that its profits can be maximised.

Experiments that consider the combined staffing, qualification and lifelong learning needs of a number of companies have proved to be effective and rewarding. Creating employment pools means that extra, qualified workers can be recruited when companies need them to cope with unexpected upturns in business. Such pools can also help to avoid layoffs and enable people to adopt lifelong learning strategies. The job rotation models, developed under ADAPT on basis of the Danish experience, are the best known but other networking projects confirm the validity of this strategy.

4. Innovation in teaching and learning

Only a few years ago, many innovative educationalists regarded ICTs as a means of enriching the contents of learning packages and as new ways of delivering training. Today, it is becoming clear that ICTs are changing the model. Whereas teaching (the supply side of learning) controlled learning activity, now the learner (the demand side) is increasingly determining its goals, methods and processes.

Many ADAPT projects have experimented with e-learning, with multimedia and with learning platforms. This section considers features that have seldom been developed from a practical point of view. The first topic is the relationship between the potential to create a virtual learning environment and a learning culture in a company. The second is the use of simulation games and the creation of virtual situations for trainings. Finally, some initial results on the question of cost-efficiency in the use of ICT in further training are reviewed. Some aspects of the changing role of trainers and teachers – a crucial question for innovation in teaching and learning – will be discussed in Section 6, Rethinking guidance and counselling.

4.1. Virtual learning places and learning culture

Many lifelong learning projects based on an increased use of ICT are often unsure about the learning culture that they should develop. Many training providers start from the assumption that learning should be embedded in a traditional school system, in other words in an academic culture. However, some ADAPT projects tried to respond to the technological or production culture of their clients. This section highlights different approaches, including a virtual campus, e-learning enriched by the building of an online community and experiments to embed the project in the industrial culture of the company.

The first generation of e-learning was based mainly on making learning resources available on the Internet and the degree of interactivity was not very high. The rapid development of ICTs and the almost revolutionary pace at which these were spread has meant that large numbers of the population have become accustomed to their use and this has changed the picture completely. Now tools have to be interactive and future-oriented and they must also anticipate the new methods that people will use in the knowledge society to inform themselves, to communicate, to cooperate, to work and to learn. The German ADAPT project **Tele-learn - *Entwicklung einer Internet-basierten Tele-Lernumgebung*** (Development of an Internet based learning environment) focused on the development of an interactive campus, which was more a representation of academic and school culture than an industrial culture. The Internet campus makes available to the learner Internet facilities that parallel classical tools such as the classroom and library, and seminar and group rooms. In the 'exercise room', the learners have the opportunity to assess their own progress. A choice of materials is available to enable self-testing and self-evaluation. However, some of these facilities were used infrequently, because of the trainees' lack of experience in new forms of learning and in self-learning discipline.

A virtual classroom does not completely replace the need for personal contact. It is important that tutors are available online through e-mail and white board or by phone during the whole course. A German ADAPT project, **Minerva** - ***Handwerksfrauen im Lern- und Kooperationsverbund*** (wives of craftsmen learning and cooperating) recognised this from the start. Online learning released the participants, who were wives of craftsmen involved in the family businesses, from time and space constraints. This gave them the opportunity to learn at home, in the office or when they could escape from housework and the demands of other members of the family. Asynchronous communication, where those taking part are not connected in real time so that messages have to be left on e-mail, bulletin boards and voicemail, supported the learning. It enabled people to work together but it did not make up for the direct support that might otherwise have been provided by classmates. So, the project made provision for connecting people in real time by computer conferencing and chat groups. This made it possible for the participants to exchange experiences and contributed, by the end of the project, to the creation of a virtual community,.

The Austrian ADAPT project ***Cluster Netz*** also adapted its learning packages to the culture of the automotive sector, in order to be as practical and relevant as possible. Together with its transnational partners, it developed a virtual learning place based on what they called a 'total learning life cycle'. The approach was centred on the idea that learning progresses through the same phases as the 'total product life cycle', which is the organisational form for production in the automotive and other industries. It starts with identification of skill needs. It then proceeds to the stage of planning methodologies and learning contents and the testing of the training prototypes. During the training phase, quality control and 'in-line' inspection are important, as well as a low set-up time and high productivity. The equivalent of the maintenance phase in the production life cycle is the work support that the trained employee receives through refresher courses and other information activities. Finally, just as in industry, old learning modules have to be phased out but some of the training and learning methodologies might be recycled.

TIDE, a large ADAPT project in Air France, the main French air carrier, was able to build on the technological culture in the company, as all personnel work with PCs and other high-tech equipment and this equipment has become more user-friendly, over the years. These factors enabled the company to move gradually towards distance learning. The training budget was about 15% of the gross expenditure on staff salaries, so it was relatively easy to set aside money to develop new systems in the expectation that they would prove to be more cost effective. For example, instead of training personnel in a model of an aircraft cabin, a CD-ROM was created that responded to the same training objectives. Other learning packages have been developed for refresher courses on air regulations. Because members of staff are scattered around the globe, it was obvious that developing a CD-ROM would be much more cost effective than bringing them together to undergo this training.

The last word has probably not been said on this issue but it is becoming clear that learning in the information society is part of a new context. Will learning remain an activity clearly distinguished from other human activities or will it become a transversal issue, linked to all

human activities whether individual or group? Should learning be embedded in an academic culture in that of virtual communities or should it adapt to the specific culture of companies and industries?

4.2. Learning from virtual situations: the new potential of simulation games

In the real world, people learn not only from their successes but also from their mistakes and those of others. Simulation games enable people to learn from their failure in a situation where there are no attendant business risks for their companies and have been offering new insights for some years. However, the use of a computer makes it easier to manage the game, to bring in a number of factors simulating the response from other actors to decisions of the players and to build-in modules explaining concepts, glossaries and links to further learning. Some simulation games explore the use of the Internet to allow players to participate without having to commute. Also, some of these games are an opportunity to combine the transfer of professional knowledge with training in social skills, especially when developed for playing in a group. This is only the start of challenging new experiences and, when private business becomes interested, the experience of developers of adventure games could be imported into continuing training.

The ADAPT project **Dolores (Dortmund logistics review and education system)** developed a simulation game that aimed to transfer knowledge about logistics in a transparent, visual and practical way. It simulates the work of a small supply company in the automotive sector, easily understandable by most of the participants. As it uses the Internet and is like many modern adventure games, ICTs are brought into action in an interesting and enjoyable way. The accessibility of the game and the intelligent use of time pressure, where one phase of play equals a business day, make each of the processes more transparent and understandable. It is an attractive way of learning in which players receive information from what they see and hear and then have to take action. Learning by doing is more effective than learning from written exercises or lectures and it also boosts motivation for further learning.

The *Team Game* is a simulation game developed by 'STV- Innovation and Labour' a research foundation created by the social partners in Flanders (Belgium) in the ADAPT project **Teamspirit**. It aims to engender a better insight into the methods of teamwork in work organisations and shows how teamwork operates in practice, opening up the most important problems for discussion. It also explains the need for organisational changes from a business point of view. It. In the first stage, participants are confronted with a line management scenario in which all communication goes through the supervisor who takes all the decisions. In the second stage, trainees work in teams and divide the responsibilities between them. The final stage enables participants to work out how to improve teamwork, taking account of the realities of the company for which they work.

Another simulation game to train people for working in autonomous teams has been developed by the ***Équipes autonomes*** (autonomous teams) project Autonomia. It aims to help players understand the difference in logic between autonomous teams and the classical hierarchical work organisation. It involves a team of eight to twelve people who play during one day. It simulates a series of production cycles in four to five sessions, each lasting for fifteen minutes. During each of these phases, the organisation can change into a self-controlled system built upon autonomous teams. Each phase contains new challenges corresponding to external or internal pressures in a production system.A one-hour assessment after each phase enables lessons to be learned that apply to the real work situation. Trainees learn to understand the benefits of working in autonomous teams, to measure the results of their decisions and to understand the value of information and communication and new attitudes needed in the new organisation.

GiMA, the promoter of the German ADAPT project **WIR – *Wesentliche Ideen realisieren*** (realise essential ideas) has also developed a series of simulation games. For example *Simultrain* covers project management in a company and is used for 'training the trainers' courses, whereas in *TOPIC 2000*, four groups of players, each simulating a separate SME, compete which each other and this is used in management training. Insights into processes, decision-making and clear connections with business culture are fundamental to the approach.

For many companies, the move to a new production system based upon lean production is a real challenge, especially in terms of human resources. The **Lean production** project developed *Mission Cassiopée*, a CD-ROM for self-learning. This interactive tool helps the learner to understand the change process using the specific case of the production of a cooking pot. During the process, the player has to reduce to a minimum all production and commercial operations that do not bring added value. The system helps the learner make decisions and compares performance to that of experts.

From these ADAPT experiences it is clear that one of the conditions for the success of simulation games is the involvement of industrial partners in their development. This involvement guarantees that the simulation, the background documentation and the criteria used for decisions reflect reality and also means that the learners have to take concrete decisions in the course of the game.

A second condition for success is a high degree of interactivity. Processes, procedures, decisions and reactions are simulated but should be as close as possible to reality. The game should enable participants to build on their experiences and give them the ability to understand the processes. The decisions of the players should provide the basis for action and consequent decisions. When decisions are correct, the learner should see positive results. If the wrong strategies are chosen, the player should learn immediately which faulty decision led to what situation, and a series of options should be suggested to stimulate an immediate reaction to correct the problem.

A third condition is to make skilful use of time pressure and, in one case, a business day is represented by one hour of playing time. The time frame should enable the 'coach' to explain

what has happened and why, to help the learners gain necessary insights and to provide links to information on further individual or collective learning.

4.3. Cost-effectiveness of ICT for learning

The use of computers and multimedia for training purposes is not new and now developers and providers have to bargain with their company or institutional clients and demonstrate the cost-effectiveness of their proposals. An example of the development of costing models and pricing matrices for e-learning has been developed by the UK ADAPT project **SMEs Gain**. Most of these discussions were between partners, and commercial negotiations are seldom the subject of research for obvious reasons. Businesses always scrutinise any expenditure or investment very carefully and this also applies to the costs of training. The **TIDE** project is an example. Even when it could clearly show that its new approach to staff training had made the company more profitable, this profit was not re-invested in training. It is conceivable that market pressures will play a much larger role in the choice of future training methods, tools and providers than traditional educational and training providers are currently prepared to acknowledge or anticipate.

Two French ADAPT projects analysed the use of ICT for training purposes and the main barriers to their introduction into training institutions. Training institutions and networks apparently underestimate the time needed and the costs involved in training trainers and facilitators to use ICT and in changing internal work organisation. Other projects have sought solutions to reduce the cost of developing learning platforms. The findings of these projects outlined below are probably representative of the vast majority of training organisations in the European Union.

Formateurs et technologie (Trainers and technology) analysed the tools and practices used in three networks for professional and continuing training in France. These three networks brought together a few hundred training centres employing a few thousand trainers. The project concluded from in-depth surveys that the network to which a centre belongs does not play a predominant role in the ways in which that centre uses multimedia. The stimulus and support provided by the hierarchy and by more technologically-minded colleagues are more decisive in the development of strategies. In general, the preparation time for the move to multimedia is greatly underestimated. Before a training centre can use multimedia in an efficient way, it needs to invest time in documenting, testing and evaluating hardware and software. And, of course, trainers have to be trained and guided in the use of ICT.

Internet: *nouveaux horizons pour la formation* (Internet: new horizons for training) carried out a similar analysis, on the use of Internet. It brought together 25 case studies from a variety of organisations and structures from different Member States, and another twelve experiences are currently being documented. The project concluded that the use of the Internet implies a complete change in the working methods of the trainer who has to anticipate the questions that might arise when the learner uses the learning packages. Again, many institutions seem to

underestimate the time needed for changing work organisation and the training investment needed. The main barrier to e-learning remains the cost of setting up and implementing such a training system over the Internet. However, it is not always necessary to invest in the construction of new platforms. Simple tools such as a browser and e-mail, which are becoming standard facilities on every new computer, can be enough to enable learning to take place over the Internet.

Another way of supporting the cost of developing Internet platforms is for organisations to share their use, or simply to buy the license for the use of a platform that fits the needs. For example, IFPME, the main French-speaking training organisation for SMEs in Belgium, was impressed by the distance learning platform plei@d, developed by CNAM *(Conservatoire National des Arts et Métiers)*, a transnational partner from the Pays de la Loire in the ADAPT partnership ***Regiones BIS***. Instead of wasting time and money in developing and testing a new platform, IFPME bought the licence and it has now developed an ICT course that functions on this learning platform.

Many institutions developing e-learning are willing to invest in the development of Internet platforms, even though a number of alternatives might exist. However, they constantly underestimate the changes in work organisation required, both in organisational and financial terms. At first sight, there is no reason why continuing training institutions should differ from other companies and businesses preparing for the information society. The Benchmarking Report on 'Strategies for Jobs in the Information Society' ([12]) indicates that only one tenth of all information society investment by businesses is in ICT hardware and software, while the remaining 90 per cent is in human resources, notably training and changes in work organisation. Cost-efficiency in training organisations offers a vast field of research, as yet unexplored.

4.4. Some suggestions on the use of ICT for learning

ICTs do not only change methodologies, they enable the development of new learning cultures. More experimentation is required in the development of new models that reflect the culture of a specific company or business. This would help to ensure that Lifelong Learning is not seen as a 'lifelong' sentence, but rather as a natural extension to production and work.

Simulation games can be used for continuing training. They enable participants to gain a better insight into processes and to learn from their mistakes without these mistakes harming the business. They are also cost-efficient and effective and offer a new method of learning, which is both interesting and attractive.

([12]) Commission Working Document SEC(2001) 2222, Brussels 7.2.2001, p 14.

Interactive media have led to the development of many adventure games, even to the creation of a new (sub)-culture of people playing worldwide over the Internet. The potential impact of this degree of interactivity on simulation games for continuing training has not yet been tapped.

In general, the cost-efficiency of introducing e-learning is not very transparent. Expenses linked to changes in work organisation and the retraining of staff are either not included or are underestimated in budgets. This is largely because of inexperience and the lack of comparable costings.

5. Valuing learning

Employers are becoming more insistent about their need for a qualified and suitably trained labour force and this is leading to a much higher demand for recognised learning than ever before. Whereas it is generally accepted that the European economy needs an increasingly mobile workforce, there is still little transparency in terms of diplomas and certificates. Actions like the European computer driving license (ECDL), supported by the European Council and the European Commission might contribute to a new approach, and the implementation of the Bologna Declaration ([13]) will probably improve transparency in terms of university degrees.

However, these developments will not help most employers to understand the skills and knowledge possessed by their employees or candidates for a job. They also do not help employees or unemployed people who have not had the opportunity to reach the formal educational levels they would have liked to attain, but who have gained knowledge, skills and experience over long periods in informal settings. The development of systems for the accreditation of prior and experiential learning (APEL) could change the situation in which jobs and careers are only available to those with formal educational qualifications. The development of effective accreditation systems could also motivate people to start learning again, and help companies to find the 'brains' and skills that they need.

Some ADAPT projects have developed tools and mechanisms related to the accreditation of prior learning, focusing on explicit validation and recognition. For example, earlier in this report the Flemish project, **Age-conscious training policy**, is mentioned and this project imported a French concept for management of competences. The **Minerva** project's aim for its participants was to reach the *Meisterprüfung*, the official recognition of further training for most German crafts and trades. There is also some evidence that companies recognised the benefits of having better-trained permanent staff, without the need for formal recognition of learning and skills, as was the case in the project **EU JobRotation - A new track in Europe**. The ***Sentieri di carriera per il personale produttivo: sviluppo e certificicazione delle competenze alla parmalat*** project sought a clear recognition of new capacities and improved performance, through social partner involvement, ensuring that people would get promotion or higher remuneration in the company. However, these examples remain exceptions within ADAPT.

Only in Ireland was accreditation one of the national priorities for the ADAPT initiative. The **Equate** project (educational qualifications and accreditation tuned to enterprise needs) has analysed 26 Irish ADAPT projects, covering different sectors, and most of its findings are applicable to the rest of Europe. Its research states that:

([13]) Joint declaration of the European Ministers of Education convened in Bologna on the 19th June 1999, http://culture.coe.fr/her/eng/bolognatexts.htm [cited 5.11.2001].

'While most ADAPT projects recognised the value of accreditation (in terms of attracting and retaining staff, and helping employees to build progression pathways), the accreditation process was widely viewed as being complex, time-consuming and remote. Relationships should be established between different awards as part of an overall national qualification framework. Single subject accreditation, credit accumulation and transfer, and mechanisms for the accreditation of prior learning can all facilitate lifelong learning but must be more widely publicised and used. The new qualifications framework currently under development should:

(a) develop accreditation measures to recognise equivalence of certification across education and training;

(b) facilitate accumulation and transfer of credits from different learning institutions or workplaces towards a single qualification;

(c) accredit learning attained on a modular or single subject basis, i.e. not solely programmes completed but with appropriate integrating elements for award of full qualification;

(d) work with industry in the development of standards and accreditation;

(e) embrace all forms of learning, both formal and non formal;

(f) develop mechanisms to enable industry to link its training into the national qualification framework;

(g) ensure the Irish system of accreditation is compatible with international credit transfer systems.'

The full research report is available from Cork Regional Technical College. Available from Internet: http://www.-deis.cit.ie/equate [cited 30.5.2001].

5.1. The learning organisation: integration of learning and work

Many ADAPT projects demonstrate the need to adapt work organisation and attendant needs to upgrade employees in technical and basic skills and to search for ways to enable companies to learn as organisations. Many books have been devoted to the 'learning organisation' over the last decade but they contain few descriptions of concrete cases, tools and practices. It was interesting to note that ADAPT projects tried to develop concrete practices, and a number of them have reached conclusions and lessons that can be transferred to other companies in other settings. The 'learning organisation' is not based on one single concept and case studies support the suggestion that each company has to select a strategy that fits its own goals, needs and culture. In a learning company, learning and changes in work organisation are integrated, but changing the company's structure and production seems to be the trigger while learning is seen as a necessary component of these change processes. The strategies chosen for the changes can be different. Sometimes projects seem to focus on the process rather than on pre-defined goals, and build on the employees as much as on the management. Other projects

prefer to start from the wishes expressed by management or from the needs detected by their own consultants.

Changing hierarchical organisations and fostering the self-responsibility and creativity of employees can only follow investment in training in those basic skills needed for working in autonomous teams. The French ***Équipes autonomes: innovation organisationnelle et preservation de l'emploi*** (Autonomous teams: organisational innovation and preservation of employment) started by helping people to understand the difference in logic between autonomous teams and the classical hierarchical work organisation. Having achieved this, an all-company discussion tried to reach a general agreement on a new concept of working with autonomous teams. This was accompanied by staff training, by the introduction of a pilot team and by new guidance and monitoring arrangements. The company also needed to invest time in weekly and monthly self-evaluation by the teams. The result was that the autonomous teams reacted much more quickly to changing situations and events, could anticipate better and often had a wider choice of options because all members of staff were involved.

The same outcomes were experienced by **FEP Construnet**. Increased competition in the industry forced building companies to introduce flexible teams, with more autonomy on the site, improve quality and to incorporate competences that had previously been outsourced. These changes, in turn, highlighted new training needs. The **Enterprise of the learning organisation in the Apulian SMEs** embarked on a change in company culture as driver for the change process. Clearly this project was very much process oriented, and focused on the existing production groups within the company. The change process was built on the development of group dynamics and collective learning processes that provided the framework for personal development. For example, learning techniques were imported from the theatre, to help people improve their interpersonal skills.

Lean production also based its approach on an interrelation between changes in work organisation and training. In this case, external consultants helped management to understand problems in various departments and to propose action plans. Training was seen merely as a complement to the action plan. However, the entire company was involved, on the basis that all employees contribute directly or indirectly to the quality of products and services and to the added value of the business. In **TIDE**, an airline company transformed itself into a 'learning organisation' with technology as the driver of the change process. The company is very large, its staff is scattered all over the globe and technological changes are a continuous challenge. Training is, again, a complement to action plans, but the actions are more centralised and learning perhaps more formalised than in other learning companies.

The **Marchmont Observatory** has been collecting a number of good practices from ADAPT projects focusing on SMEs. Through its cooperation with the European consortium for the learning organisation (ECLO) the project has been able to identify appropriate tools, approaches and lessons. More information can be found from **Marchmont Observatory**, at the website: http://www.lifelonglearning.ac.uk.

A further interesting source of information is the European Commission's web site, http://europa.eu.int/comm/employment_social/equal/ac.cfm. The section, devoted to ADAPT and Employment, under themes and then theme work organisation, contains documents, reports and project descriptions from the EU thematic group on 'New forms of work organisation and ICTs'. This thematic group supported a transnational week entitled 'The future of work, the work of the future', in March 2000, which involved 30 conferences and seminars in a dozen Member States. The information is presented in three clusters:

(a) flexibility in work organisation, production and working time;

(b) cooperation and networking between SMEs;

(c) new forms of training and new learning content.

Additional relevant material can be found in French and English on the web site of Racine, the national support structure for ADAPT: http://www.racine.asso.fr/adapt/semaine.htm.

The integration of working and learning has many implications as the organisation of work and the organisation of learning interact. This, in turn, has an impact on many existing staff functions and on the development of new ones. For example, human resources professionals could advise management on the establishment and moderation of strategic learning groups and line managers could take on new roles as coaches. Although they may still organise traditional training activities, the main objective of the training department's efforts could be directed towards assisting the line managers and supervisors in shaping and managing everyday work activities, enabling people to learn as they work. In Section 6 on rethinking guidance and counselling, some practical examples are provided to support these ideas.

5.2. Supporting innovation and anticipation

Intimately linked to the concept of a 'learning organisation' is the issue of innovation. Companies look for newer products or renewed production processes, to boost their business and benefits or simply to remain competitive and to continue trading. In the industrial society, information, innovation, knowledge management and learning were all separate processes. The ADAPT experiences seem to confirm that in the emerging information society, these processes must become more integrated.

The German ADAPT project **Cocotel - *Kooperation und Kommunikation durch Teleworking und Vernetzung*** (Cooperation and communication by telework and networking) aimed to deliver sector-oriented information on health and safety and environmental management. New EU legislation was forcing companies to adapt. This situation led to the development of a system where companies could share information, learning and innovation. The project developed audit software and sectoral information systems for breweries and for the car repair and trade sector, delivered through ICTs. Training programmes and seminars were then used to enable the employees in charge of health, safety and environment to familiarise themselves with the software. The sectoral training bodies participating in the

project delivered training on content, whereas the research institutes ensured the link between research and practice.

Another example demonstrating the need for linking innovation, working and learning is the German ADAPT project **New book economy - building the informatin society** (NBE-BIS). This project analysed trends in the entire book industry including publishers, libraries and bookshops. Together with its transnational partners, it analysed and anticipated the convergence of the audio-visual, telecommunication and publishing sectors and the way in which this convergence was affecting cultural industries and institutions. It showed that totally new professions were emerging such as information brokers, multimedia designers and online publishers. The 'knowledge workers' of the new information chain will have to be able to work on an interdisciplinary basis and to create original synergies. The project had first to focus on changes in job profiles and work organisation practices linked to ICT before it was able to design new training programmes and modules for the workforce.

Innovation in the context of a learning organisation is a totally different concept from that supported by innovation policy in the 1980s and early 1990s. Then, policy makers hoped to support innovation by financing outside agencies, which could import new technologies and procedures into companies. This was an approach that was not always rewarded by positive results. In ADAPT, innovation agencies took another stance. They did not try to import technology or new processes but tried instead to guide SMEs in transforming themselves and building upon the hidden knowledge of the people involved. They used a number of instruments to accompany the process and acted as broker for new technologies or concepts when necessary.

For small and medium sized companies, innovation circles seem to be an effective instrument for building on the hidden knowledge of people and supporting them in learning from each other. They can also assist in importing technologies and practices that are acceptable to management and staff and which then stand a better chance of being implemented successfully.

The Dutch ADAPT project ***Noordkop naar de top*** (Noordkop to the top) worked with managers from companies that were not in direct competition to develop peer group learning. The innovation agency Syntens saw its role more as that of a facilitator supporting the process by helping the participants learn from each other's experiences and by acting as a broker in relation to the technical expertise and resources available within the region. The instruments used by the facilitators merely accompanied the process, which was controlled by the participants themselves. In the awareness-raising phase of the project, participants became aware that innovation in their company could increase profitability. After this phase, the facilitator carried out structured interviews to help participants come up with potentially innovative ideas for their SMEs and to select the most suitable. In the implementation phase, the entrepreneurs looked for in-depth knowledge and support in the management of the innovation process.

In the case of **Caprinova** - ***Desenvolvimento agro-industrial da fileira caprina-columella*** (agro-industrial development of the goat farming sector, transnational project Columella) the targets were set by structures outside of the companies but, to a large extent, the process involved all the project participants. The Institute for Agricultural Development adapted the format of quality circles to that of 'innovation circles'. This was particularly effective in the context of rural areas lagging behind in terms of social and economic development. Again, the innovation circle supported a continuous cyclical process of learning, action planning, action implementation and evaluation, which facilitated adjustments, change and development. In this case, key stages in the cycle were the training of group facilitators and of existing technical advisers, the identification of learning needs among producers and other actors, the organisation of analyses and debates and the implementation of training courses and study visits. The process goes beyond normal training by creating a 'space' where problems and opportunities can be diagnosed, joint solutions found and support given to specific new activities. The innovation circle's discussions led to the restructuring of production units, the creation of a producers' association, new methods for the collection and sale of milk and the production and marketing of cheese.

5.3. Self-development, key concept for the learning organisation

In a 'learning organisation' concept, personal development and organisational development are strongly interwoven. The German ADAPT project **Peovilu** - ***Personal- und Organisations-Entwicklung im virtuellen Unternehmen*** (personal and organisational development in virtual companies) demonstrated that only a combination of changes in work organisation, use of innovative and performing ICT and training could lead to the desired changes. Companies in the building sector need to be able to operate further and further away from 'home'. This means that employees in charge of building sites have to be able to maintain regular and effective communication with the 'home', to train newly recruited (local) people, to learn from experiences and anticipate potential problems and to manage knowledge sources. The project developed a concept for the personal development of such employees comprising workshops, psychological and communication training, phases of self-learning and individual and group coaching.

Even if there are no apparent reasons to combine personal and organisational development, it is still worthwhile basing individual learning modules on the tasks and work processes of the individual. Qualification needs are generally defined in a somewhat abstract fashion that does not take account of all the aspects of work processes, work tasks and the skills needed by the employee. The complex nature of technical skills and methodological, social and personal competences and their interaction only become evident in the workplace and often many requirements can remain hidden, especially in fully automated processes. This was an aspect that was explored by the Austrian ADAPT project ***Arbeit in der automatisierten Produktion*** (experienced-based working in automated process industry – new conditions for HR, training and work development). The research revealed that many requirements concerning

knowledge, skills and experiences needed for 'less-qualified' jobs could be identified easily, but for the vast majority of these no formal methods of qualification could be cited. Clearly, people tend to believe that in computer-steered production lines, experience-based knowledge no longer has any tangible or significant role. In reality, the complexity of steering processes means that even very minor changes in the environment can jeopardise production. Experience-based knowledge is necessary to prevent problems in the production process, to fine-tune machines, to identify and remove sources of malfunction and to modify the process for products with slightly different specifications.

Nettex A developed its methodology on the basis of self-organised learning. This implies that the learner:

(a) takes the initiative;

(b) determines his/her own training needs;

(c) formulates his/her own learning targets;

(d) determines his/her equipment resources;

(e) chooses the appropriate learning strategy;

(f) evaluates his/her own learning results.

In order to use such a strategy, it is necessary to structure the learning environment. The learner is confronted with much information and has to deal with complex issues. Support is provided by consultation with experts, by cooperation in virtual study groups and, most importantly, by the exchange of experience in the workplace.

Self-assessment plays a role in enabling the learner to evaluate progress and achievements. For example, **Direct (distributors and retailers course targeting)** developed an instrument for an online record of achievement for employees in the distributors and retailers sector in the Southampton area, which proved to be very useful. The **Ulysses** project in Spain created an online monitoring module, enabling both the learner and the teacher to evaluate the time the student spent on online courses, the time needed to resolve problems or answer questions, or how many times he or she consulted the hints for the solution before answering.

5.4. Some suggestions on valuing learning

There is a good case for developing a partnership approach between industry and education, at both national and sectoral level. The Irish case studies clearly indicate the opportunities for developing systems that are transparent, easy to manage and respond to the needs of individuals and companies. In many EU countries, social partners have developed their own joint training funds and structures and these may be valuable partners to involve in such processes at sectoral level.

Research has described the concept of the learning organisation and the need for the integration of learning and working. However, industry and, in particular, small businesses do not possess the knowledge, the instruments and the support facilities. In addition, training providers and even policy makers in charge of developing lifelong learning policies may not be aware of the concept, its potential and the methods for its implementation. Documentation on best practices in the development of learning organisations from all EU Member States and beyond could be made available over the Internet to support awareness raising and dissemination.

Integration, or at least an alignment, of innovation and lifelong learning policies seems to be desirable from a business perspective. Transversal approaches at EU level involving different institutions and directorates from different policy fields might be created to move beyond the current, rather formal, consultation procedures used, for example, to develop European Commission policy documents. The preparation of the European Commission's position on the national action plans for employment might present an important opportunity to develop such a common and integrated approach.

6. Rethinking guidance and counselling

In the old career pattern, most people chose a job or profession and then stuck to it to the end of their working lives. It was not exceptional to see people retiring after only having worked in a single company. Today the world is different, as a lifetime job has become the exception rather than the rule and many observers are predicting that job-hopping will become part of the post-industrial culture. Lifelong learning and adapting to new jobs or professions will be a constant factor in a person's career. The question of access to high quality information and advice about learning opportunities is now a key question for everybody.

In terms of the influence of ICT on learning, we are probably still in the stone age. In the coming years, there will be an explosion of ideas leading to the mainstreaming of new learning concepts, fundamental changes in educational systems and institutions; perhaps even the idea of learning itself will not remain as it is today. Multimedia and the internet are revolutionising the way learning has been provided during past centuries. Will teachers and trainers become superfluous and will ICT make them obsolete? Probably not, but it is reasonable to assume that their roles will change considerably.

Infosys - ***Auswirkungen der Informationsverarbeitung und beruflichen Weiterbildung - Schlussfolgerungen für die Ausbildung von Teletutoren*** has defined a job profile for teletutors. Basically, a teletutor should be the contact person for all questions about learning, providing a hotline to answer learners' technical questions about equipment and software and perhaps even carrying out distance maintenance on their computers. The teletutor should be the go-between for participants and the training institution, thereby reducing their risk of isolation. And of course, this tutor could also participate in transforming learning content using appropriate media. The potential role of the teletutor is very broad and can only be specified in a given project, as it depends on the target group, learning contents and the tools and methods used.

The French **Autofod** - ***Apprendre à utiliser les technologies et à organiser la formation ouverte et à distance***- (Learning to use technologies and to organise open and distance learning) focused on the changing roles of trainers, on their increased and diversified workload. Instead of defining the role in a learning project, the project brought together six French organisations with considerable experience in continued training. 'Who takes care of the need for trainers to learn how to use ICT as tools of their trade?' was starting point for **Autofod**. The project did not aim to help the trainees to master the technicalities of ICT but rather to discover the potential uses of these technologies. At the end, the majority of participants identified changes needed in their own work tasks and the consequences for working practices and work organisation in their institutions. However, only a small number of participants had taken steps to introduce ODL into their own institutions. Encouragement by management, support by colleagues, and the degree to which group work and autonomy prevailed were all cited as main factors that helped to promote change. The main barriers that

had to be overcome were lack of support by management and the lack of finance, technical equipment or time. There is still a long way to go in this area.

Even if vocational and further training of teachers has pinpointed their role as educators, guides and counsellors of students, their main tasks continued to be in the transfer of knowledge. Teachers define the contents, prepare the programmes, certify courses, teach classes and monitor and examine pupils. This is an approach where the teacher is assumed to know everything, or at least a lot about a subject, and where the pupil is ignorant or has serious gaps in his or her knowledge.

The old model is changing: in the information society, it is becoming clear to learners that teachers have limited knowledge of subjects, and moreover, they have to adopt lifelong learning approaches themselves, because new knowledge and approaches are becoming available at an increasing rate. Up-to-date information can be found much more easily than before, over the Internet for example, and many students use their web browser to search for this information. However, the added value of information on the net is not always evident and the best information might be hidden under many layers. It is also important to be able to relate new findings to what is already known. So why should teachers and trainers not focus on helping their students to survive in this jungle and on equipping them with the tools and skills that they will need to find their way?

This is clearly a new field of activity, needing some clarification in terminology and in concepts. To date, coaching and mentoring have been used as synonyms but there is a difference. Mentors have usually followed a path similar to that of the people they support, enabling 'clients' to benefit from their experiences. Communication skills and empathy are the most important instruments for a mentor. Coaching is more pro-active and the expressions stems from sport rather than from social science. The coach helps the 'trainee' generally in relation to a small number of issues and often uses specific instruments and schemes.

6.1. New orientation of human resource development departments

The new challenges might be even more important at company level than in the education system. Section 5 (Valuing learning) outlines how learning and working are becoming integrated in a company. This new concept demands a change in orientation for training and HRD departments which will have to change their views on training and adopt new ways of working. It also changes relationships with managers, supervisors, external consultants and training providers. Learning has become a strategic objective, increasing the number and the quality of training activities. The training department will continue to have a role to play in developing learning programmes and methods for learning in the workplace or in seminars, in cooperation with internal and/or external experts and training providers. The trainer will become less a teacher and more a designer of learning and a producer of learning materials. Line managers, supervisors and qualified technicians can also play a role as instructors, with a

least some initial guidance from the training experts. The bulk of the training function changes from teaching to planning, conceptualising and evaluating. Therefore, training staff will need new competences to understand and support changes in work organisation, technology, marketing and economics. The role of trainers is changing dramatically and their own training has to be adapted. For example, the Cork Institute of Technology completely altered its staff development programme to include topics such as revising materials for open learning, video-conferencing, accreditation of prior learning (APL) and mentoring.

Cooperation may be necessary between trainers and external consultants and providers, especially in the areas of training needs analysis, curriculum construction, learning methodology and evaluation of training. For example, the **DO** project (to enhance capabilities to develop operations in SMEs) involves internal change agents from within the company, supported by external advisers. The involvement of foremen and supervisors in training activities requires new concepts of training and supervision, and new relationships with management and with other departments in the company.

The changes are not restricted to training policy and the training department, but apply to the entire HRM function, as discussed in Section 3. In general, HRM policy is not geared to low-skilled workers and has to be adapted. Confronted with skill shortages, companies tend to recruit new workers instead of re-orienting and training people who have acquired knowledge and work experience in that firm. The latter approach can be more cost-effective in many cases. Also, recruitment procedures should include some form of practical test or assessment. Normally, selection is greatly influenced by communication skills but with the inclusion of a practical test, candidates with lesser linguistic but good practical skills, that would be useful in the job, would stand a better chance of being selected.

6.2. Coaching, guiding, facilitating

Change processes require people to detect needs and to guide and monitor the changes. It is not clear to what extent such a facilitator should be available purely as support to the change process rather than as participant. Some promoters state that the facilitator has to be an employee from the company, in order to be able to implement changes in the company, whereas others see this role as that of an independent person who is not directly involved in implementation.

The **Enterprise of the learning organisation in the Apulian SMEs** project defined three different functions in the learning/working process:

(a) the facilitator, facilitating the learning process by stimulating communication and exchange and activating the learning process;

(b) the observer, observing group dynamics via pre-defined observation grids, giving feed-back to the group and supporting the facilitator;

(c) the guarantor of results: the person responsible for the performance of the group, having management duties, has an additional responsibility to report on the learning process of the group that he/she leads.

According to this project, the people fulfilling these three different functions play an active part in the group and, therefore, can not be external professionals.

The Irish project **Self-managed development in flat organisations - 'Career' 2000** has adopted an even more radical view of facilitating. In redesigning the work organisation of a company, the management layers within the organisation radically reduced.The traditional role of supervisor was replaced with that of a facilitator, leaving only two structural leadership roles in the new organisation, that of manager and facilitator. The facilitators have to support change, to detect flaws in production and try to encourage their colleagues to find appropriate solutions to problems. So their responsibility is not restricted to change, but is enlarged to 'normal' production.

However, most processes are facilitated by external consultants, in cooperation with internal change agents. Syntens, the promoter of ***Noordkop naar de top***, a regional innovations agency, focused on SME managers and owner-managers, who were willing to innovate and to learn from their peers. The facilitator supported by helping the participants learn from each other's experiences, using tools such as graphic aids, forms and charts. The facilitator acted as a broker in relation to the technical expertise and resources available within the region. For the implementation phase, which did not require the input of external consultants, the innovation agency restricted its role to monitoring. ***Developnet Veneto***, set up by a training organisation of the regional employers' organisation, adopted the same philosophy but took a more active role by offering tailor-made training packages.

Information and communication technologies are changing the picture even more. They use synchronous (virtual) meetings, where those taking part are connected in real time and communication takes place by phone or videoconferencing. For example, **Tele-learn** used ICT very successfully to enable tele-tutors to answer all the enquiries from learners within 24 hours. Most of the teachers and experts came from established universities, research institutes, consulting firms and publishing houses and direct communication would not have been so easy to organise without the Internet and video. A number of ADAPT projects in the area of Freiburg, amongst them **Cocotel - *Kooperation und Kommunikation durch Teleworking und Vernetzung*** (Cooperation and communication via telework and networking), cooperated with the European Telecoaching Institute ([14]) to provide guidance and training in the use of ICT as an instrument for coaching and counselling. This Institute developed a holistic telecoaching concept, combining techniques such as videoconferencing and individualised coaching. Although desktop videoconferencing cannot replace face-to-face contact, it is much more effective than telephone conferencing. Spoken language has only nine dimensions (such as volume and voice colour) but body language has 104, of which 49 are related to facial

([14]) http://www.telecoaching.org/

expression. Up to 80% of information is absorbed visually. This telecoaching concept can be particularly valuable in helping groups in need of additional support to overcome barriers to learning.

Another dimension is the implicit choice that organisations make when creating new guidance services. There are many examples of projects delivering either advice or support to companies or dispensing individual guidance to learners. Few projects combine the setting up of a counselling network, to support and guide SMEs on business planning and strategic management, with a service to individuals in terms of the identification of personal learning needs and guidance in career and learning opportunities. **Duty Calls** provides one such an example and another is **Direct (distributors and retailers course targeting)**. The primary objectives of **Direct** related to aiding SMEs and their employees, in the retail and distribution sector, in the port of Southampton. Employees were assisted in career-based learning opportunities through the creation of an online advice and guidance mechanism together with online record of achievement. At the same time, SMEs were guided in managing the Euro, using ICT as a profit tool and taking advantage of the impact and opportunities of e-commerce.

The **Informa XXI** project also combined individual guidance and company counselling. Its *servicio de orientación sociolaboral* (social and vocational guidance service) promoted the personal and vocational development of employees in the social economy sector, especially in relation to the information society. The project developed a comprehensive strategy for the social economy, which plays an important role in employment strategy for the Madrid area. All the training programmes were accompanied by tools and support activities to help companies decide, plan and implement changes in their production processes. The service also guided companies through reorientation and change and supported the creation of new social economy companies. For example, some 60 companies benefited from an ICT audit, while others used the management guidance service to improve their product quality, marketing or ICT systems. Linked to the counselling service was the Observatory for the Social Economy, which was responsible for the needs analysis, and the research for new job opportunities in the social economy.

As can be seen from these examples, not only the definitions but also some concepts of the new roles in guidance and counselling would benefit from further clarification and research. Also, the potential of ICT in relation to guiding and coaching has not been sufficiently explored. New concepts will only have a reasonable chance of being implemented in a business environment when they have been properly tested and documented.

6.3. Peer learning

As teachers and trainers become facilitators and mentors, new trainers are emerging within industry. Co-workers can help their colleagues to upgrade their skills. An interesting approach was developed by the UK project in the ADAPT partnership *AGE*. The objective of this

partnership was to support learning for workers over 45 years of age. Central to its approach were peer mentors, from the same generation as the workers whom they coached. These mentors were credible to the target group because they had all once been in a similar situation but had subsequently made progress in their lives.

The **Trainers network** organised by FAS in Ireland developed an approach based upon peer learning. Trainers learned from each other in partnership groups not only in Ireland, but also transnationally, for example through the DIVE network, in which many European public labour market training organisations participate. This seems to be an especially good method identifying and disseminating best practice. The Dutch ***Noordkop naar de top*** brought together, on a regional basis, a group of managers from different small companies that were not in competition, thus creating a 'safe' atmosphere that enabled them to exchange experiences and learn from each other. Also the Italian ***Developnet Veneto*** and the German ***Wesentliche Ideen realisieren*** **(WIR)** saw peer learning as an excellent tool to promote a combination of innovation and learning for managers.

However, all these projects seem to have had different implementation conceptsx. ***Noordkop naar de top*** focused on the group as the main instrument and played a brokerage role for external resources that could enable company-based innovation. ***Developnet Veneto*** combined its approach with tailor-made seminars, whereas **WIR** involved a double network, one of experts and consultants and the other of specialised tutors.

The Austrian project ***Arbeit in der automatisierten Produktion*** developed an approach where learning from their own experiences became an important objective in the qualification of young workers. On the basis of its findings, the project recommended that older workers should play a new role in the training and coaching of younger colleagues, in quality assurance, in innovation and in knowledge management.

The conclusion that can be reached from these experiments is that peer learning seems to offer a promising approach to people with management responsibilities who wish to transform their businesses through the induction of innovative projects. It also appears to be of value to trainers and other professionals who wish to gain knowledge and experience in totally new methods.

6.4. The role of middle management

Each new training strategy must involve the entire company so awareness raising is a key issue. The **Lean production** project designed a programme in which the training of management and middle management was as important as that of the 'pilotes' (change agents). The ***Équipes autonomes*** project regarded the involvement of middle management in the change process as one of the main challenges. Foremen and team leaders might have seen their position and work threatened by a move towards increased autonomy and better qualification of the frontline workers. They had to be convinced that these changes had

positive implications for their own work and responsibilities and that they could acquire new qualifications themselves.

The involvement of the hierarchy in the design and implementation of learning activities will increase in consequence of continued integration of work and learning in companies. Management should become increasingly geared towards training and assisting learning efforts, especially in industries dominated by low-skilled workers. Most team leaders are excellent workers or craftsmen but lack management skills. They have to learn how to instruct their co-workers, how to build a team, manage people and communicate with them. The results of a number of ADAPT projects provide mixed messages. Often, an effort has been made to involve middle management in learning but in a number of cases drawbacks were reported. Results seem to underpin the importance of the issue but suggest a lack of motivation on the part of managers to become involved in learning for people on the shop floor.

The French **FEP Construnet** project aimed to retrain about 9000 workers in the building sector. In order to organise training activities on building sites, 350 site managers were trained as tutors and incorporated this function into their other duties. They received a three-day training course on training methodologies but they did not receive any specific guidance during their subsequent tutoring activities. The reporting on their training activities was also incorporated into their regular reports to the company management. However, finding time for training activities was not always easy, especially during periods when the site was very busy.

In ***Sentieri di carriera per il personale produttivo: sviluppo e certificicazione delle competenze alla parmalat***, all levels of management were involved in the project and supervisors acted as assessors, tutors and advisers although some external tutors were also involved. The role of production supervisors was seen as invaluable, because they knew the equipment through and through. They could interpret 'weak signals' that could prevent a major breakdown and could solve the problems efficiently. However, initially most of them had to acquire the capacity to transmit their knowledge to others.

If (middle) management has to play a role in training and transformation in a company, then the skills and competences of these people is crucial to a successful outcome. The **Teamspirit** project intended to use foremen as trainers. However, lengthy discussions were needed to clarify concepts and to remove differences in approaches and views between partners that had totally different cultural perceptions (industry, educational institutes and innovation agencies). After these barriers had been removed, it became clear that not everyone in line management had the necessary social skills to manage people in autonomous and independent teams. Also, the **Peovilu** project discovered that some managers did not possess the personal competences and motivation to lead people successfully.

The Flemish project ***Human resources management voor laaggekwalilficeerde Werknemers*** (Human resources management for operators) came to realise that there was little point in working solely with low-skilled workers. As immediate superiors play a key role in creating the conditions that are needed for learning, the project had to work with them as well and

convince them of the value of the exercise. Middle management also have to coach people in their learning and to create a framework in which learners can integrate the outcomes of their training into their daily work.

More effort needs to be made to motivate middle management to take on additional tasks in learning. They need time to invest in these tasks and they need to receive more support from senior management. More developed concepts, experiences and good practices should be identified and disseminated.

6.5. Some suggestions on the question of guidance and counselling

A number of successful practical approaches and examples of the provision of guidance and counselling exist, but it is impossible to produce a single blueprint for action. Changes in work organisation, changes in the way work is valued and an increase in the need for learning are transforming companies and the relationships between the staff in different departments. All are involved in some way with learning and learning changes their tasks, behaviour and responsibilities. It would be an interesting and valuable exercise to compare a number of experiences at EU level, focusing on the changing roles of trainers, HRD workers and middle management in relation to lifelong learning strategies in a 'learning organisation'.

A similar exercise on the changing role of external trainers, coaches and guides in growing independence in companies and on the impact of ICT on their functions, would assist in clarifying emerging new patterns and innovative approaches.

To promote the concept of the 'learning organisation' in a practical way, it would be necessary to develop experiences in different sectors of industry, to test and document them properly and to disseminate and mainstream the outcomes. It would also be necessary to develop transferable instruments and learning materials and to adopt new mainstreaming methods and techniques.

7. Bringing learning closer to home

The development of ICTs, their increasing performance, their ease of use and affordable prices have opened up new perspectives for training and education. Multimedia, the Internet and mobile phones have created new opportunities and challenges. Up to now, the learner has had to go at a prearranged time to the place where a teacher or trainer was giving his or her 'performance'. Now the perspective is totally different, as learning contents can come to the learner at any time of the day.

Telelearning, or e-learning as it is more fashionable called, enables the learner to learn when and where he or she wishes. At least that is the theory but in practice, while e-learning can demonstrate some success, it is still in the development phase and the mainstreaming of best practices will take a few more years. Then, technology will have developed further and e-learning practices will have to follow. Section 4 of this report focused on some features of ICT that promote innovation in teaching and learning including the concept of virtual learning places and the use of virtual situations for learning. This section addresses the use of ICT in bringing learning closer to home. ADAPT projects based in rural areas suggest that e-learning is a useful strategy but that it still needs to be backed up by other, more traditional, means. An effective policy concept for bringing learning nearer to the users is that of the University for Industry (UfI), which has been developed in the United Kingdom and was kick-started by over 100 ADAPT projects. For information on learning networks, learning regions and sectoral networks see Section 8.

Many ADAPT projects have indicated that what is immediately on offer in terms of learning is often inappropriate to the needs of employees and companies. The second section of this section will address this issue, and indicate some practical solutions, especially in relation to the growing ICT needs of companies.

7.1. The role of ICT facilities in bringing learning closer to home

Learning closer to home involves reorganisation and redeployment of resources to create learning centres in all types of locations where people gather, and not just in schools or other educational institutions. A number of ADAPT projects have developed telecottages and telecentres to promote e-learning and this activity has resulted in new insights and experiences. Further information on telecentres is available in the following publications produced by the ADAPT team in Europs, the European Commission's technical assistance office for ADAPT and Employment initiatives:

- telework: tomorrow's form of work ([15]);
- telework: some 100 examples from ADAPT ([16]).

These are available from the Office for Official Publications of the European Communities and can also be downloaded from the library section of:
http://europa.eu.int/comm/employment_social/equal/index.cfm.

The need to organise courses for individuals, facilitated by the Internet, can stem from two sources. In the first instance, the person willing to learn cannot go to an educational institution because either he or she is shift-working and the training provider does not offer learning opportunities outside of office hours or because public transport is not available when required. However, companies or businesses also have needs for e-learning. Specialised courses might not be available, or it may not be cost effective for the company to organise its own training for the small number of people to be involved, or members of staff may be working in a number of different or distant locations. In these cases, learning in the workplace can also be facilitated by ICT. An example is **Cocotel**, which combined web-based information services with training for employees responsible for environmental management and health and safety in specific branches of industry. These specialists, in different locations, could only be involved in highly specialised training courses when these were supported by the information on the Internet and it would not have made sense to organise such provision locally. The same applies to companies where the employees are located at many different sites, far from the company headquarters. The **FEP Construnet** used building site managers as trainers for all their employees, using a set of well-focused CD-ROMs as training materials in short learning sessions on site. The **TIDE** project enabled all the commercial staff from an airline company, who were scattered over the globe, to be regularly retrained. This was also a cost-efficient way of organising training.

Within ADAPT, there is only one example of authorities looking at e-learning from a holistic perspective and that is in the UK. The third call of ADAPT was devoted to the launch of the University for Industry (UfI). This new programme, sponsored by the UK government, aimed to develop new lifelong learning strategies, by stimulating demand for lifelong learning among businesses and individuals and by improving access to high quality and innovative learning, in particular through the use of ICT. 'Learning on demand' became the basic strategy. Individual learners played a role in specifying their needs, instead of using only pre-packaged courses. Learning opportunities were to be developed that enabled people to learn whenever they wanted, wherever they wanted and at their own pace. UfI projects have used village halls and shopping malls, libraries and museums, train and bus stations, health centres and leisure complexes, and many other bases.

([15]) Innovations No 5, CE-16-98-045-XX-C, 1998, p 28.

([16]) Working documents, CE-V/7-98-004-XX-C, 1998, p 60.

One of the examples of the UfI-approach (now re-christened Learn Direct) is provided by **Duty Calls**, a project setting up learning access points across the geographical area where it was active. The model for this project relies on online delivery to provide local access to ICT-based learning within, or outside, normal working hours. More information about this strategy and a number of good practices can be found at the Marchmont ADAPT project. This project created an observatory to identify and document the changes that are required for SMEs to benefit from ICT supported learning. It established five regional networks to test and drive the processes of change and development that are needed to turn the UfI from a concept into reality. These networks identify good practice emerging from Marchmont pilots and other projects within their regions and feed this information to the observatory ([17]).

7.2. Rural areas and e-learning

People from rural areas have little opportunity to participate in technology-based training, as most of these opportunities are concentrated in large cities. The travel time is a barrier but more difficulties are encountered in trying to align working hours with continuous training. This causes real problems in those industries that use shift work and both the workers and the companies are adversely affected by the lack of opportunity to acquire new skills. People who try to reconcile work and family responsibilities experience the same difficulties and, of course, less mobile people such as those with disabilities suffer from the fact that there are few local opportunities to take part in continuous vocational training. E-learning is often promoted as an alternative. However, the introduction of e-learning has to overcome some barriers itself.

For example, there is still a relative lack of resources for the implementation of an e-learning strategy. Private industry is not investing much money and the technological infrastructure, including the number of ISDN lines, is comparatively underdeveloped. Furthermore, the introduction of telelearning in a rural environment is more difficult than in a densely populated region. Local people are not used to ICT and have no awareness of its pre-dominant role in society.

The need to use simple, understandable and practical language is, therefore, often underestimated, as is the time required for the rural population to become familiar with ICT. People even have to be reassured that the equipment will not be damaged if they make mistakes in its use. The process demands very experienced, skilled and flexible tutors who are rarely available in remote or rural areas. **BRISA** made a considerable investment in awareness raising and in motivating the people they wanted to reach. They learned that it was necessary to use a simple, understandable and practical language. It also took some time before the teachers and trainers were sufficiently well versed in the use of ICT for learning purposes.

([17]) For further information see: http://www.lifelonglearning.ac.uk.

The **Ulysses** project tried to overcome the lack of resources by creating a local partnership based upon cooperation between the regional employers' organisation of the Badajoz Province and the regional authorities of Extremadura. It aimed to support SMEs and their workers in adapting to ICT, especially in business services. It could organise multimedia learning in 13 training centres, all based in rural areas in the province. These centres were subsidised from different budget lines for the training of employees and unemployed people. However, the project organisation encountered a number of financial problems. It appears that project funding alone cannot create permanent structures. Without a strong commitment from authorities and private business, there is a fear that the relative gap between rural and more densely populated areas will grow, instead of shrinking.

These methods may be suitable for courses formerly taught through textbooks and lectures but for technological training, e-learning on its own is not appropriate. People need to be able to see, feel and work with the tools and machines. ***Info-Tecno-Movil*** used a mobile classroom to deliver technological training to workers and companies in villages far from existing training centres. So, instead of the learner going to the school, the school came to the learner. A mobile classroom can reach remote areas and can be equipped with expensive technological hardware and also software with a short lifetime, for example computer-aided design and computer-aided manufacturing, which would be too expensive for small companies or small villages to acquire. This mobile classroom was combined with distance training for courses that did not require specific specialised technological equipment.

ADAPT projects have tried to find a solution for different problems, and have often found good solutions. In general they concluded that e-learning should be seen as a complementary strategy in rural areas and should not be used as a substitute for other forms of training. Apparently the best results are obtained by combining live seminars with teletraining. But not all problems can be solved by money alone: both the authorities and private industry seem to be unaware of the growing digital divide between urban society and rural areas.

7.3. Bringing learning closer to the needs

Companies have to adapt to changing markets and competition and training strategies are part of the answer. Bringing learning closer to home concerns not just the physical aspect of where the courses can be taken but also bringing their contents closer to the needs of people, for career development, and closer to the needs of companies and even of regions. A better-tailored response compared to the one-size-fits-all strategy boosts motivation and thus provides better results. ADAPT projects have been working on this issue from different angles.

The Austrian ADAPT project *Profilierung des Grossraumes Graz zur Lernenden Region* (**Learning Region Graz**)) carried out a SWOT analysis ([18]) of the Graz region, which had been hit very hard by economic decline. A series of institutional discussions between the key actors in the region complemented this analysis. After these steps had been taken, the project organised workshops for SMEs that focused on a detailed analysis of all companies' needs. This included business strategies, current cooperative and competitive relationships, core skills, complementary skills, core products, complementary products and added-value chains. From this, cooperative strategies and learning opportunities were developed.

A variation on this strategy is to set up cooperation between businesses, training institutions and other organisations at local, national and international level to identify learning needs. The **Adastra** project established such exchange networks and found this process very useful in transforming traditional companies into learning organisations.

Forma PYME (Train SMEs) focused on the direct needs of small companies. This implied that the needs analysis had to be carried out by a trainer from within the industry, as such a person could understand the real problems and formulate the particular needs in a language that the company understood. The **DO** project (to enhance capabilities to develop operations in SMEs) combined learning and consulting in a new way which prioritises company self-diagnosis and 'learning how to learn'. This approach has the capacity to help a company to anticipate its skills needs and to introduce a learning culture. **Pegaso - *Programa de empleo para la gestion de la adaptacion en sectores*** (employment project for the management of sectoral adaptation)) also built on the companies' needs but limited its concerns to the most urgent questions, which were implementing ICT and improving management. The project created homogeneous groups of companies to tackle their most urgent training needs, resulting in a cost-efficient regional response.

Another approach is to focus on the needs of one business sector, as was the case in the ADAPT project **EU JobRotation - A new track in Europe**. The focus was on the tourist industry in Sicily, an important factor in the region's GDP, employing 10 per cent of the workforce, and probably involving a further 10 percent of people working in precarious jobs and in undeclared work. Through a combination of improvements in quality management and in human resources, the tourist sector hoped to extend the tourist season to the full 12 months of the year and to attract more business, luxury and cultural tourism. **Upbeat (Urban partnership Barnet and Enfield ADAPT towncentre)** used the same strategy, focusing on small businesses in the town centre. The project analysed needs and provided training and support services in the locations where the SMEs were trading through the establishment of five high street resource centres.

Trade unions can be an important catalyst in deepening the appreciation of learning needs at the workplace. The **CRETA** project, developed by CGTP-IN (*Confederação Geral Dos Trabalhadores Portugueses - Intersindical Nacional*) in Portugal, developed and tested

([18]) Analysis of Strength Weaknesses Opportunities Threats

lifelong learning tools for worker representatives to enable them to participate actively in work organisation change and to develop their capacity to influence them. Trade unions are also active in developing learning motivation for groups of workers such as older workers, women and ethnic minorities.

Regardless of whether a regional, sectoral or networking approach was used, or a single company was involved, most ADAPT projects saw lifelong learning as an approach which placed the company's needs at the centre of the action. Many strategies and different instruments were used to detect these needs. Clearly, there is no 'off the peg' solution to needs and all existing instruments have to be adapted to circumstances in a particular region, business sector, company or cultural environment. Business organisations and public innovation agencies could do more to test new instruments and approaches and make them more widely available. This would provide companies with a greater degree of choice and make them less dependent on external consultancy firms that only promote their own toolkit.

7.4. The ICT learning needs of business, and how to respond

How can real gaps in ICT qualifications be detected, and how can effective strategies, which meet the real needs of companies, be proposed? The Spanish ADAPT project **Pegaso** carried out a comprehensive diagnosis of local SMEs. A second phase identified and clustered homogeneous groups of companies, based upon their most immediate training needs. First of all, an in-depth analysis of the economic situation of the region was carried out, making use of existing studies and databases. Then an exhaustive survey on the use of ICT in the companies was launched, involving questions on following topics:

(a) the organisation of the company;

(b) the current use of ICT in each department and its integration into production;

(c) concrete details on hardware, software, Internet use;

(d) ICT management and support;

(e) areas where improvement is desired, potential problem areas;

(f) concrete training needs.

The resulting data was improved with qualitative results from four different panels. One represented very small companies of less than 10 employees, one represented business services and a third represented technology-related companies. The fourth panel was intersectoral, and provided additional, complementary information before the action plan was implemented. This diagnostic stage was also used to raise awareness and to gain the confidence and trust of managers seconded by sectoral organisations and public authorities.

The example above demonstrates the stated ICT learning needs of companies, but in many cases the change process focuses on the adaptation of work organisation. Here, ICT training plans are not seen as a stand-alone activity but as a support for an action plan. The needs

analysis will thus start with a review of actual processes and an enquiry into the changes envisaged by the management. The French ADAPT project **Lean production** started by visiting the company and leaving a set of short diagnostic fiches to be considered by managers. The responses were discussed by the consultant with managers in charge of particular departments such as commercial, production or quality services. Then an action plan was proposed and discussed, again at management level, and communicated throughout the company. Only after that stage was the training planned that would accompany the change plan. Training tools and modules leading to the acquisition of new behaviours and attitudes were seen to be as important as technical training. The project centred its training approach on the use of practical tools and checklists, which meant maximum effect could be gained in a short time span. Both workers and company management could see the immediate results in the company and its performance and this reinforced the motivation for change.

The training offered for the Italian ADAPT project **DO** (to enhance the capability to develop operations in SMEs) was also complementary to its consultancy service. It developed an approach where the change agents, who were employees of the SMEs involved, spearheaded the training and change activities. It did not use predefined checklists, as in a series of interactive workshops a tailor-made checklist of self-diagnosis was discussed, which led to a first 'self-image' of the company. The checklists focused on individual and collective competence, as well as outcomes in terms of performance. This group-based analysis helped identify the different internal and external functions of the company, the different production and market segments and the most important strategic areas. Only after this exercise, could the action plan for improvement and the training components be decided.

In many cases, changes in work organisation are not made because the company feels that they would be a better way of working or of boosting profits. Often they are made as a last resort to help a company or an entire industry to survive. In areas of the textile and clothing industry in Europe, production has been relocated to low-wage countries. The Greek ADAPT project, **Business networking for the transfer of best practices in work organisation and integration of new technologies**, developed flexible management systems build upon ICT for a company that had delocalised part of its production to Bulgaria and Albania. Communication and coordination of production became prime issues and so e training programmes focused on the use of ICT for networking and human resources development. Facing the same challenges, the Flemish ADAPT project **Clothild** (training for the clothing industry in local and delocalised settings) discovered that training needs related to a wide range of topics including IT communication, organisation of production, styling and construction of basic patterns, as well as ironing and finishing techniques. The most urgent question was how to bridge the knowledge gap between manual workers with very low formal qualifications and workers with more formal qualifications and knowledge. The conclusion reached by this project was that the model of 'more training' had to be changed to that of 'better training', but linked to changes in work organisation and the introduction of ICT.

7.5. Some suggestions on bringing learning closer home

E-learning has the potential to contribute to a lifelong learning strategy. This requires a more integrated policy, where the means are used cost-effective but take into account the specific needs of the population.

It is only through improved cooperation between education and industry that the training on offer will respond more directly to the needs of the potential customers. Trade unions could play a role as catalysts in change processes.

ICTs provide new tools for learning but they also present a challenge to companies in terms of training employees to use them effectively. However, training institutions should not assume that the introduction and effective use of ICT is the main preoccupation of business. The effective use of ICT is only a response to needs in production or work organisation and as it is a means rather than an objective. It should be treated as such and learning needs should be defined that take more account of the need for change and the imperatives of an action plan to implement the change process.

8. Learning networks

Most of the 4000 ADAPT projects created local and regional partnerships. Some of these partnerships were informal, while others created permanent structures such as learning networks and learning regions. The reasons for creating these partnerships were diverse. In all cases, it became clear that the project promoters and other institutions expected mutual benefit from cooperation. The partnerships became the main means of ensuring that the business objectives of the SMEs and the social objectives of administrations would be pursued. The partners in such a network could be diverse but often included local authorities, chambers of commerce, trade unions, universities and training agencies, regional development agencies, SMEs and service companies. The invaluable role of these partnerships was recognised by the European Commission in designing its new EQUAL Community initiative, in which development partnerships will become the main tool for innovation and mainstreaming.

In ADAPT, some of these partnerships called themselves 'learning regions' and shaped their regional focus and their networking approach into a new concept. The 'learning region', in the same way as the 'learning company', supposes that the potential of all actors is mobilised and that they are involved in a 'bottom-up', self-organised project. It thus becomes clear that learning processes are actually the engine of the 'learning region'. In a learning company, it is the learning of the individuals in the workplace or in external training courses that lights the fuse. Here, it is the learning activities of employees or managers that stimulate a new structural developmental processes, which, in a concept of 'organisational learning', changes the functioning of regional institutions, the nature of their cooperation and their networks. Similarly, these self-organised developmental processes engender a high degree of flexibility in responding to the rapid changes in markets.

The European Commission's *Memorandum on lifelong learning* has provided the scope for a new policy concept by adding a newly coined term 'lifewide' learning, which points to the spread of learning and a shift towards integrated policies that combine social, cultural and economic objectives. In the view of many ADAPT projects, the local or regional level seemed to be right for mobilising a variety of actors, creating or fostering partnerships and supporting a lifewide learning approach. Further documentation is available on the following web sites: http://www.buildingterritories.org from Proteus NI; the ADAPT Support Structure from Northern Ireland; and http://www.zukunft-der-regionen.de/ from the German *Nationale Unterstützungsstelle der Bundesanstalt für Arbeit*. Both of these web sites are the results of thematic work on basis of project clusters; the first grouped ADAPT and Employment projects on a transnational basis and the second brought together German ADAPT projects.

8.1. Learning regions: mobilising all actors

These new forms of cooperation between companies, authorities and service institutions are based on mutual interest and aim to support dynamic processes rather than preserving the

status quo. In the end, a stable and flexible regional network, or rather a network of networks, can emerge from activities that are started by individuals involved in professional learning processes. The feedback provided through the communication mechanisms that have been set up for the regional network, supports its transformation into an incubator for innovation strategies. Evaluation and self-assessment activate the potential for innovation. Mutual interest drives the networks to provide new business services, adapt and transfer technology and create more tailored training programmes for the region. It enables SMEs to benefit from the mutual exchange of experiences, knowledge and intangible potential that leads to local economic development through feedback loops between all of the participants.

The project **Learning enterprises by local, regional and international networking** was developed in the Gnosjö region in Sweden, consisting of four municipalities with a total population of 85 000. It is an industrial heartland with over 1 500 strong, labour-intensive SMEs and low unemployment. Educational levels among the workforce are fairly low and as society and industry demand new knowledge and skills, the project developed new regional learning networks as a response to this need. The networks were developed at various levels:

(a) in enterprises, to unearth hidden competences and knowledge;

(b) between equivalent enterprises, where the networks were built between individuals with different or similar functions and capacities, to enable an efficient exchange of knowledge and information;

(c) between enterprises and their subcontractors and customers, where the networks were built to facilitate communication on new, higher standards or expectations and on the need for new knowledge in relation to these standards;

(d) between enterprises and universities and other institutions of education and research, where the networks were built to develop future methods and structures for lifelong learning in enterprises and the initiation and implementation of new industrial research.

Rather than building the **Learning Region Graz** network on existing institutions such as administrations, knowledge institutions, labour market services or the social partners, this project chose to create a dynamic model allowing participants to work at different degrees of intensity. The needs of the companies drove the network system. The companies were clustered together in target-oriented groups, with each group functioning more or less autonomously, often with a core team surrounded by a number of satellites.

Most projects needed an animator to bring partners together, to stimulate debate, to create structures and ensure their management, to define objectives and monitor progress, to settle disputes and to promote cooperation at every level. This networker was usually based in the project promoter's organisation but had to be recognised by all partners as neutral person. So, building trust among the various partners was one of the main tasks of the networker.

In Graz, the networker played a crucial role in ensuring effective coordination between the groups and making the processes transparent. It was also essential to keep minds open to possible changes and create scope for continuation after the end of the funding period. In

Gnosjö (Sweden), the establishing of the Centre for Industrial Development was a key factor in the success of the project, as it was able to operate as the catalyst and driving force for the project.

Setting up a network is not an easy task and ensuring its sustainability is even more difficult. The condition for the partnership surviving beyond the boundaries of the project funding is that it has demonstrated that it can provide practical benefits for all its partners. It should encourage an on-going exchange of experiences and facilitate cooperation to the extent that the members begin to feel that they own the network. In this way, it will stand a good chance of being financed from the resources of the participants in the network once external funding ends.

8.2. Understanding the needs

Networking at local or regional level has many advantages. First, the local level is where people live and work so they know the structures and the people involved. Preparation of local initiatives that involve all the economic, social and cultural actors, including enterprises, trade unions and associations, guarantees that all dimensions of local problems can be taken into account. However, bringing the right partners together is not very useful if there has been no assessment of the needs of the region and its businesses.

In ADAPT, many different methods have been used to detect and analyse these needs. Some projects carried out in-depth analyses, while others built on their own knowledge and experience. Some focused on all aspects of regional development, while others focused on specific learning needs. However, successful regional approaches had three elements in common. They always analysed the overall development and learning needs of companies and translated these into tailor-made offers for individual businesses, management staff and employees. Also, the research and assessment activities at both collective and individual level were used to provide information and promote awareness about the project. Finally, the approach developed self-responsibility, as the 'client' decided the direction that the changes and the accompanying new training should take.

In the **Learning Region Graz**, it was the university which took the initiative. The opening up of Eastern Europe and Austria's EU membership had slowed down the economy in the western part of Austria. Graz was hit very hard and a number of jobs and a number of companies were lost. However, the Styria region had some advantages, as there is a high degree of innovation in local companies and they are well placed to seize new business opportunities because they are located so close to the border. In order to benefit from this position, the project analysed the strengths and weaknesses of the region and compared this SWOT analysis with that of partner regions. It also reviewed regional learning processes, the development of SMEs into learning organisations and the clustering and networking of companies and organisations.

Developnet Veneto had a different approach for assessing the needs of companies. The initiative was taken by Cofinidustria (one of the main Italian employers' organisations) and its regional training and service organisation, SIAV. They started from their own in-depth knowledge of the problems of SMEs in the region. The Veneto production environment is characterised by a strong presence of SMEs, representing 95% of all companies, and seems to be particularly sensitive to market changes. The process of decentralising production from larger to smaller companies required a stronger integration of companies in the value chain. This, in turn, required a more sophisticated and flexible form of work organisation, better management, a higher degree of innovation and the development of human resources. These problems were outlined in a report, which was used as a starting point for the discussions.

The **Pegaso** project (Spain) aimed to improve the competitiveness of local SMEs and their workers by taking advantage of the opportunities offered by information and communication technologies. It developed a holistic approach, starting with a diagnostic stage that identified homogeneous groups of companies and their most immediate training needs in terms of ICT. This enabled the project to align training with the real needs of companies and to propose individualised strategies. At the same time, the survey was used to inform, to raise awareness and to gain the confidence and trust of company management.

8.3. Maximising the benefit of the regions' resources

Authorities and local organisations often operate at regional level and have the financial and other resources to invest in new projects and innovation. It is also the involvement of the local or regional authorities that enables better project management and better use of infrastructures. In this respect, local development promotes the establishment of a public-private partnership and mobilises new actors and new financial resources for innovative projects. It can achieve benefits in terms of economy of scale by organising common services such as training, marketing and consultancy. There is a long-term dimension to the concept of a learning region, which depends largely on the space that it provides for companies and organisations to develop new entrepreneurial activities.

Learning Region Graz solved the problems of fluctuations in demand for goods or services from the companies involved by proposing a common strategy. A pool of skilled workers was created and was available to respond to employers' needs for extra labour. The long-term unemployed were also trained and integrated into this pool. The project defined competence networks as, 'company-based, regionally integrated, knowledge intensive networks which exploit the endogenous potential of a region for the purpose of achieving "competitive advantages" for all participants (companies, networks, regional actors) on the basis of both stable and flexible relationships between legally and economically independent actors in value systems'.

Dolores (Germany) needed the cooperation of a university and other partners at regional level to create and disseminate a simulation game. The involvement of a number of companies from

the sector that had been targeted, guaranteed that the simulation, the background documentation and the criteria used for decisions reflected the reality and also that the learners had to take concrete decisions in the course of the game. Other key actors such as chambers of commerce and industry, trade and craft chambers and sectoral bodies in transport and logistics helped to disseminate the product widely. The university could not have produced such a powerful and realistic game without the contribution of companies and key actors. Similarly, without the involvement of scientists and experts it would not have been possible to create an effective training tool for employees and companies.

An important reason for fostering local networks is the improvement of local or regional competitiveness. For example, in the case of the Italian **Quasys** project, the objective was to help local SMEs to set up quality assurance systems conforming to ISO 9000.

Lean production promoted by Ceforalp, an organisation created by various employers' federations, aimed at reinforcing the competitiveness of the SMEs in the Rhône-Alpes region by combining consultancy services and training courses. To mainstream the methodology beyond the 300 companies involved, the partnership with regional authorities needed to be strengthened. Also, in cooperation with the University of Lyon, the first post-graduate diploma in Lean Services was created, targeting managers as students and involving them in projects in companies.

Local learning networks deal with issues common to all companies. In this way, companies that are not direct competitors because they are active in different sectors or trades, can become more open about the problems they face and the solutions they use to create more a effective work organisation and to train their members of staff.

8.4. Sectoral networks

Within ADAPT, many projects worked in sectoral partnerships in sectors as different as goat farming, steel or textiles, and information and communications. Sectoral learning networks enable a rapid response to a changing business environment. For example when industry is restructuring, creating new products or changing production methods, it requires new initiatives for the learning and qualification of its workforce.

A sectoral observatory can discover and anticipate new trends by analysing its information and transferring this information to wider sectoral bodies or joint institutes put in place by the social partners. For example, one of the most dramatic changes in the information society is influenced by the convergence of the audio-visual, telecommunication and publishing sectors, affecting both cultural industries and institutions. These industries and institutions can continue to play a role in the new electronic era if they can ensure that their information professionals and content providers are empowered to cope with the new situation. The 'knowledge workers' of the new information chain have to be able to work on an interdisciplinary basis and to create original synergies. The **Minerva** partnership analysed

trends in the entire book industry that covered publishers, libraries and bookshops and focused on changes in job profiles and supporting new training for the workforce. The transnational partnership developed innovative models based upon research carried out by a variety of actors belonging to professional associations, research institutes and universities, covering publishing, libraries and booksellers. Although within a more restricted framework, **Tele-learn** (Germany) developed a similar e-learning approach for the pre-press sector. Although there is currently little evidence that electronic media will replace paper-based publications in the very near future, the pre-press sector is undergoing dramatic changes in the media value chain. One important aspect of this is increasing use of the Internet for communication and for the distribution of information.

Most sectoral learning networks combine the regional and the sectoral approach. A good example is **Nettex A**, operating in the Bavarian textile and clothing industry. Strengthening existing cooperation between companies and vocational training institutions resulted in more attractive and improved training packages. An Internet platform was used to coordinate information, consultation and vocational training in the region. The 'learning region' approach has contributed to improved cooperation and networking between companies, business services and training providers. ***Cluster Netz*** created a regional learning network in the automotive and supply sectors within the automobile cluster Styria AC. Although the project was organised regionally, it benefited greatly from exchanges with its transnational partners in Germany and the United Kingdom.

If learning networks are to be organised on a sectoral level, the companies involved might be wary about possible breaches of confidentiality or unfair competition. Therefore, cooperation between sectoral (professional) organisations and training providers is a prerequisite for the creation of such sectoral learning networks. Companies feel ownership of the sectoral organisations that they have created to defend their common cause, especially as these bodies are managed by boards that they elect and are funded by their contributions. This common understanding and trust enables the training providers in the partnership to contribute with quick and flexible responses to new challenges. It helps to align learning, the provision of information, the adoption of new forms of work organisation and production within the same strategy. The **Cocotel** project in Germany supported SMEs in their attempts to apply revised industrial safety standards in an efficient way through modern information and communication technologies. It created learning networks in the car trade and repair sector together with the *Kfz-Innung*, a professional organisation representing the car trade and repair workshops, and in the brewing sector with the *Umweltzentrum* (the environmental centre) of the Chamber of Craft and Trade. **Clothild** (training for the clothing industry in local and delocalised settings) involved the social partners in its training networks through a sectoral training institution that they funded. These networks also included the Flemish public training agency VDAB. The Portuguese **Caprinova** project worked for the goat breeding and processing sector and involved members from four rural development associations, the sheep producers' association of South Beira, two regional agricultural offices and two agricultural colleges.

However, it is not enough to bring key actors together; (potential) clients are also important. They can help to promote a better understanding of problems and to ensure that the solutions proposed are tailored to their needs and company culture. At the same time, involving clients in the learning process is a first step in awareness raising and in making the proposals more acceptable to companies, their managers and employees. **Delphi**, which operated in the Greek pottery sector, involved companies in the design of the learning tools and procedures, whereas Arcidonna, the NGO promoting the job rotation concept in the tourism industry in Sicily, needed to establish close and continuing cooperation with its client companies.

8.5. Some suggestions concerning learning networks

The regional level seems to be the most promising level at which a holistic strategy can be deployed. Such a strategy can mobilise a variety of partners including public authorities, employers' organisations, chambers of commerce, business services, consultants, regional development agencies, trade unions, universities and other institutions for research and training. However, the creation and animation of the networks often requires investment in terms of staff and money. Who should fulfil these functions and who should finance them? Then, in the long-term, there are issues related to continuity. How can a 'learning region' or similar structure, which has been financed initially by experimental, external project funding transform itself into a 'sustainable' structure and continue to function once that funding is terminated?

The involvement of universities, research institutes and training providers is crucial in implementing the concept of a learning region. However, these organisations do not often see the regional level as within their spheres of concern or operational responsibility. What factors or new policies could open up a debate on an extended role for these bodies or help them to gain a better understanding of the realities and needs of regions, companies and individuals?

Sectoral learning networks are a solution to many problems encountered in a specific industry but they can only be built on effective partnerships. In ADAPT, there were a number of such partnerships in which employers' organisations, trade unions, or joint institutes set up by social partners were involved. However, there appears to be little evidence that the partnership approach, deployed in a project, led to a wider social dialogue, nor has it been possible to identify the conditions that could ensure such a dialogue.

9. Lifelong learning, innovations from ADAPT

9.1. Success factors in ADAPT

9.1.1. Experimentation linked to policy debate and permanent animation

The ADAPT Initiative was an experimental programme. When it was designed in 1994, most of the other 'industrial' Community Initiatives were dealing with sectors or industries undergoing heavy restructuring such as coal mining, ship building and textiles. ADAPT focused both on small businesses and the workers they employed. In contrast with sectorally-inspired initiatives, ADAPT adopted a holistic approach and, as it was not influenced by important lobby groups, it was free to experiment. It benefited from at least three policy debates in the European Union that were animated by the European Commission. These were on the information society, the common European employment policy and related national action plans for employment, and the appeal for a social dialogue on new forms of work organisation. Unfortunately, the continuing debate on lifelong learning did not have the same influence but many of the 4000 projects provided new insights that are relevant to this topic. It was only possible to capitalise on these insights through the animation provided by the national support structures for ADAPT in the various Member States and through using the outputs of ADAPT thematic groups and conferences and the contents of ADAPT publications and web sites.

9.1.2. A well developed, demand-led approach

Most of the ADAPT approaches were influenced by the learning needs of companies and the needs of people working in these small businesses. So they were demand-led and not supply-oriented approaches based on experimentation by researchers and training providers. It is to be hoped that national and EU level lifelong learning programmes can, in the future, be more influenced by the needs of companies and of individuals rather than by the traditions and preconceptions of the education and training systems.

9.1.3. Increased use of ICT

Information and communication technologies are a new means of supporting the delivery of training. However, education and training needs a more complete understanding of the revolutionary character of ICTs, as such technologies have the potential to change people's lives, their work and their appreciation of education and learning. Even for those who work in the educational sector, the changes will be dramatic. Whereas many teachers now devote the majority of their time to the transfer of knowledge, multimedia will provide more and more well constructed, interactive learning packages. It may not be necessary for public authorities

to invest in multimedia research, as private business will make this investment when it becomes more aware of the profits that can be anticipated. The main challenge to the education system is to redesign its initial and continuing training programmes. In the future, it will need fewer 'teachers' but many more programme developers, multimedia content developers, coaches helping the learners to learn, resource people answering learners' enquiries and guides helping individuals and companies to select appropriate learning packages.

9.1.4. Cooperation between all actors

To date, learning has been seen virtually as an individual action. However, in the information society learning is being seen more and more as a holistic process. People learn individually and learn from each order in a variety of situations including their homes, workplaces and even in social gatherings, together with the more traditional learning environments of schools and universities. This requires a new learning culture that is not based on competition but based on cooperation between people, groups and structures. In short, a holistic lifelong learning strategy should comprise the three levels of individual learners, learning companies or organisations and learning regions.

9.1.5. A holistic approach that integrates different processes

In the former industrial society, learning and working were separate processes. In the information society, learning and working will influence each other, as demonstrated by ADAPT projects. Business needs to introduce continuous improvements in its production process and to develop new products. Changes in production require new training or new qualifications for employees and managers and this supposes organisational learning that, in turn, improves production and innovation. Learning linked to innovation brings tangible results, which can motivate the learners.

9.2. The European Commission's *Memorandum on lifelong learning*

The 60 ADAPT case studies presented in this report and clustered around the key messages of the European Commission's *Memorandum on lifelong learning* illustrate these key massages very well and, to some extent, can be used to highlight specific problems. Each of the paragraphs below relates to a separate section in this study, ending with some concrete recommendations.

9.2.1. The importance of basic skills

Basic skills are essential for living and working in the information society. People need to be equipped with the skills for teamwork, for taking responsibility and for managing companies and organisations. These needs set a new agenda for educational institutes, not only in relation to young people but also to adults, whether employed or unemployed. Cooperation between companies and training providers is essential in defining and implementing this new agenda and these processes also need to be supported by the involvement of management, middle management and other key individuals such as shop stewards.

The following suggestions are made:

(a) more research on basic skills not only from a personal and career perspective, but also from that of an industry moving into the information society;

(b) education systems should equip all people with skills for team working and management;

(c) cooperation between company management, shop stewards and training institutions is a key component in defining needs and strategies for the acquisition of new skills.

9.2.2. Investing in human resources

In the information society, business needs an approach in which human resources can be developed instead of being merely managed. Developing human assets can mean improving profits but it requires a proactive attitude towards the initiation of training and lifelong learning in the company. HRD managers need to look beyond the boundaries of the company in order to identify suitable practices. Also, in anticipation of potential labour shortages, an investment in training for less-skilled workers should be envisaged. Upskilling experienced front-line workers can often be a more cost-effective way of filling job vacancies than recruiting and inducting new members of staff. Job rotation has proved to be a very effective tool combining the training of employees in a company with the provision of work experience for unemployed people. It enables companies to manage their human resources on a local or sectoral level.

The following suggestions are made:

(a) a proactive HRM policy can detect problems before they begin to have a major adverse effect on business;

(b) investing in the acquisition of new competences by existing employees can be profitable;

(c) instead of human resources management, the task becomes one of human resources development. Developing the company's human assets allows its profits to be maximised;

(d) creating employment pools allows companies to adjust staffing to temporary business increase, helps avoid layoffs and enables people to adopt lifelong learning strategies.

9.2.3. ICTs improving delivery and enabling interactivity

ICTs are practical tools for the delivery of learning, but their potential impact has not been totally realised. ICTs have the potential to change the entire education system, as people will be able to learn whatever, and whenever, they want. ICTs enable people to work at their own pace, combining synchronous ([19]) and asynchronous learning ([20]). Accessibility is one new feature imported via ICTs and interactivity is the other. This will also shape new forms of learning, as different types of online group work and virtual reality can be further exploited for education and learning. Some ADAPT results will contribute to the research activities planned in the e-learning action plan ([21]). At the same time, new learning cultures will develop, transforming learning.

The following suggestions are made:

(a) ICTs change more than methodologies, they enable the development of new learning cultures;

(b) simulation games enable participants to gain better insights into processes and to learn from mistakes without these mistakes harming the business;

(c) the potential impact of interactivity on simulation games for continuing training has not yet been tapped;

(d) the cost-efficiency of the introduction of e-learning is not very transparent. This is largely due to inexperience and the lack of comparable figures.

9.2.4. Valuing experience

The integration of learning and work adds value to experience-based learning. In this way, lifelong learning is not seen as a lifelong threat by people with poor formal education or by older workers. On the contrary, the concept of learning organisations is an important step towards innovation and a continuous improvement in the performance of business. At the same time, a learning organisation gives the individual opportunities and the motivation to develop himself or herself: self-learning, self-assessment and the self-organisation of learning are given a new meaning and are key concepts for the development of lifelong learning. A partnership approach between industry and education can help move the agenda forward. This could be supported by transversal cooperation between policy makers and institutions belonging to separate policy fields.

([19]) Synchronous: where those taking part are connected in real time while the communication is taking place (e.g. computer conferencing or video conferencing).

([20]) Asynchronous: where those taking part are not connected in real time so that messages have to be left (e.g. email, bulletin boards and voicemail).

([21]) Communication from the Commission to the Council and the European Parliament, Brussel 28.03.2001, COM (2001) 172 final.

The following suggestions are made:

(a) joint training funds and structures created by social partners provide a good opportunity for developing a partnership approach between industry and education;

(b) documentation on best practices in the development of learning organisations should enable small businesses to access the knowledge, the instruments and the support facilities for the integration of learning and working;

(c) integration, or at least an alignment, of innovation and lifelong learning policies seems to be desirable from a business perspective.

9.2.5. More guidance, less teaching

The need to integrate learning and work will change the role of most actors in the teaching and training business and individuals from companies will become more involved in supporting learning. HRD departments will integrate more training aspects into all activities, supervisors and middle management will play a role in knowledge transfer and guidance of employees, and internal and external trainers will see their job content change dramatically. They will need to work with consultants, they will play a smaller role in information and knowledge transfer, but have new competences in the fields of guidance and counselling for individuals, groups and companies. More experienced co-workers may also be prepared for a new role in supporting new or under-skilled workers in learning in the workplace.

The following suggestions are made:

(a) better documentation on the changing roles of in-company trainers, HRD workers and middle management and on the changing role of external trainers: coaches and guides in growing self-responsibility in companies and in the impact of ICT on their functions, would assist in clarifying the new patterns and innovative approaches that are emerging;

(b) to promote the concept of the 'learning organisation' in a practical way, it would be necessary to develop experiences in different sectors of industry, to test and document them properly and to disseminate and mainstream the outcomes. It would also be necessary to develop transferable instruments and learning materials and to adopt new mainstreaming methods and techniques.

9.2.6. Tailor-made solutions that respond to the needs of individuals and businesses

Bringing learning closer to the learner means promoting workplace-oriented learning. The answer to the new educational needs for lifelong learning will not lie in mass-produced training but in tailor-made solutions. Aligning what businesses and individual learners need can only be guaranteed by intensive cooperation between educational institutes and industry. This means that systems of provision must shift from a supply-side approach to a demand-side approach, placing the needs of users at the centre of their concerns.

The following suggestions are made:

(a) e-learning requires a more integrated policy, where the means are used cost-effective but take into account the specific needs of the population;

(b) improved cooperation between education and industry should align training offers more directly to the needs of potential customers;

(c) ICTs provide new tools for learning but they also present a challenge to companies in terms of training employees to use them effectively.

9.2.7. Learning networks: a holistic approach

Workplace-oriented learning is a multi-faceted task that involves integrating learning, working, the adaptation to new technologies and the fostering of innovation. The different learning, counselling and support functions can only be provided by a variety of organisations and structures at regional level. The 'learning region' concept provides the framework and can mobilise all actors including authorities and administrations, universities and researchers, schools and training institutes, service companies, social partner organisations and NGOs, and even companies. The regional level is most efficient as people and organisations know each other, they have their businesses and exercise their responsibilities at local and/or regional level and so they can make effective use of the available resources. However, sectoral networks can also play an important role in finding solutions to many problems encountered in a specific industry.

The following suggestions are made:

(a) the regional level seems to be the most promising level at which a holistic strategy can be deployed;

(b) the involvement of universities, research institutes and training providers is crucial in implementing the concept of a learning region;

(c) sectoral learning networks are a solution to many problems encountered in a specific industry but they can only be built on effective partnerships.

9.3. Some suggestions for EU-policy on lifelong learning

9.3.1. Promote the integration of lifelong learning, employment, innovation and industrial policies

The development and implementation of policies in Member States has improved considerably over the last few years. However, many institutions are still structured as in the industrial era and each policy issue is tackled by a single department only. Often this consideration is isolated from other policy instruments, does not take account of the points of

view of other departments or interested parties and neglects the potential impact that any proposed changes might have on other policy questions. Such a procedure does not respond to the needs of the emerging information society. However, the negotiation, assessment and benchmarking processes linked to the implementation of the EU employment strategy can provide a better model. The priorities for lifelong learning could be used to open up a debate about the coherence of different policies, linked to lifelong learning, on education and learning, innovation and industrial modernisation programmes and employment strategies and their impact. The European Commission could lead the way towards such a coherent approach.

9.3.2. Stimulate synergies within EU programmes

Programmes and projects sponsored by the European Commission are responding to economic and political realities, just like national initiatives. For example, programme proposals have to demonstrate that they are in line with the European employment strategy, that they support equality of opportunity, prepare for the information society and promote local development. This framework contributes to a coherent strategy for the EU but the lack of effective internal consultation procedures means that it is difficult to redesign proposals, to avoid overlaps between programmes and to contribute to the creation of synergies. A small and informal group of interested officials from different DGs could provide a permanent forum in which issues linked to lifelong learning could be discussed before decisions are taken.

9.3.3. Support dissemination, mainstreaming and benchmarking programmes

EU-budget lines and work programmes normally provide considerable financial and other resources for the development of innovative projects that can contribute to policy development in related fields. Evaluation procedures are also included that enable the European Commission to check if public money has been used in a correct and efficient way. However, it is questionable whether sufficient resources are allocated to assess programme results, not from a financial and policy viewpoint but from the user's perspective. Many innovative approaches could be disseminated more widely and have a much more significant impact. This would require the inclusion of dissemination and mainstreaming activities in all programmes together with appropriate budgetary provision and improved coordination within, and between, EU institutions. Such developments would not only improve the efficiency but also the transparency of EU funding.

9.4. The way forward for Cedefop

9.4.1. Assessment and dissemination of best practices

Cedefop could strengthen its role in promoting lifelong learning strategies, by developing its ETV. It should be used to disseminate best practices, regardless of national or EU-programme origin. In addition, as training providers, social partners and companies look for solutions to specific problems, the search engine and the proposed case studies should be designed from a demand-led, more than a supply-oriented, approach. A promotional campaign for the lifelong learning section of the ETV should also be developed and implemented.

9.4.2. Upgrading of the ETV's social partners' house as a tool for stimulating the involvement of social partners at all levels

Cedefop's social partners' house is currently used for identifying resources and provides valuable information on further education and social dialogue for those involved in social dialogue at the higher levels. However, concrete social dialogue often happens at sectoral level and, more particularly, at company or plant level.

It is suggested that more consideration should be given to the needs of company managers and shop stewards for information about policy issues and for good practices, tools and experiences that can be introduced into their own work situations. This would require a clear focus on the information to be included and the way in which it should be presented. The experience of EU level mainstreaming networks in the ADAPT Initiative indicates that the launching and animation of such a network requires significant investment in human resources compared to that which is necessary for the technical maintenance of the web site.

The European Foundation for the Improvement of Living and Working Conditions in Dublin is currently preparing an observatory on industrial change, at the request of the social partners. It is suggested that Cedefop should treat lifelong learning in the same way, as this would take account of the need to integrate lifelong learning and changes into work organisation.

9.4.3. Develop thematic animation in the ETV on some of the themes of the memorandum

On the basis of the approaches demonstrated by ADAPT projects and documented in this report, useful thematic animation could be developed. For each theme, the proposed project cluster could function as a primer for an EU-wide thematic debate. As ADAPT experience shows, thematic animation brings concrete results, supports policy debate and mainstreaming, adds visibility both to project promoters and the policy issue and is very cost-effective. One of the conditions for success seems to be that the thematic work should enable project promoters to meet their own expectations and should bring them added value. Furthermore, the experience and expertise of the animator plays a key role in determining the quality of the

network's outcomes, especially when the network uses ICT as its main means of communication.

Alternatively, the proposed clusters could be enlarged by projects from other EU programmes such as Leonardo da Vinci. It might be desirable to consider a new call in other European Commission programmes that would be facilitated by the work of such a thematic network. The 'old' ADAPT project examples might function as a benchmark for the new project applications. However, the scope of the each cluster must be very well defined in order to achieve the desired results. If the ADAPT experience is to be used to its fullest, orientation towards the needs of industry seems to be as important as the focus on people's lifelong and lifewide learning needs.

This thematic animation could be developed in conjunction with the social partners house in the ETV.

9.4.4. Searching for synergies and involvement in the new EQUAL networks

The new EQUAL Community initiative has recently been launched and project applications will shortly be submitted. One of the eight themes selected for transnational cooperation between development partnerships from different Member States is lifelong learning (theme E). Thematic animation will be carried out at national and transnational level, as was the case for the ADAPT and Employment Initiatives. During the ADAPT period, the European Foundation for the Improvement of Living and Working Conditions and the European Commission's newly created European Work Organisation Network (EWON), comprising experts in work organisation nominated by Member States, were involved in a similar exercise. This created cooperative links at national level, enabling national institutions to take on board the results of many innovative projects, and to participate in one of the 30 thematic seminars and activities on new forms of work organisation organised by ADAPT, in March 2000. Similarly, the European Foundation for the Improvement of Living and Working Conditions was involved in some of the EU level seminars, which enabled it to select a number of case studies for its own research. It is suggested that Cedefop should discuss the possibility of becoming involved in EQUAL's lifelong learning thematic activities with DG Employment and Social Affairs.

Annex 1 Acronyms

AFPA	*Association nationale pour la formation professionnelle des adultes* (France).
AMU	Adult vocational training (Denmark).
ANPE	*Agence nationale pour la promotion de l'emploi* (France).
APEL	Accreditation of prior and experiential learning.
CNAM	*Conservatoire national des arts et métiers* (France).
ECDL	European computer driving license.
ETV	European training village (Cedefop's interactive website at the following Internet address: www.trainingvillage.gr).
EU	European Union.
FAQ	Frequently asked questions.
FFOD	*Forum Français pour la formation ouverte et à distance* (France).
H&S	Health and safety.
HACCP	Hazard analysis and critical control points (health and hygiene in the agro-industries).
HRD	Human resources development.
HRM	Human resources management.
ICT	Information and communication technologies.
IFPME	*Institut de formation des petites et moyennes entreprises* (Belgium).
INEM	*Instituto nacional de empleo* (Spain).
IPR	Intellectual property rights.
IVOC	*Instituut voor vorming en onderzoek in de confectie* (Belgium).
JTE	Job transfer Europe.
ODL	Open and distance learning.
ROME	*Répertoire opérationnel des métiers et emplois* (France).

RSU	*Rappresentanze sindacali unitarie* [United trade union delegation] (Italy).
SME	Small and medium-size enterprise.
STV	*STV-Innovatie en Arbeid* (formerly: *Stichting Technologie Vlaanderen*) (Belgium).
SWOT	Analysis of Strength Weaknesses Opportunities Threats.
UfI	University for Industry.
VDAB	*Vlaamse Dienst voor Arbeidsbemiddeling en Beroepsopleiding* (Belgium).

Annex 2 Glossary

Accreditation (of qualifications)	Formal process by which a qualification's status within the national VET system is established.
Action research	Research where the observer overtly participates in the activities observed, by feeding back the results of his or her analysis at various stages of the activity to those who are undertaking it, in order to help them to decide what to do in the later stages.
Alternance	System of vocational training which combines formal training with work experience.
Anticipation	Capacity to interpret information about change in the light of experience and specific, relevant knowledge so as to design strategies to meet probable future needs and circumstances.
Assembly line production	An assembly line moves goods in the course of production through a series of different work stations.
Assessment	Processes used to gather and interpret evidence of an individual's learning achievements and competence, or the action of judging evidence of learning achievements and competence.
Asynchronous communication	Method of communicating where those taking part are not connected in real time so that messages have to be left (e.g. email, bulletin boards and voicemail).
AutoCAD	Commercial software for PC-based design.
Benchmarking	Process of continually measuring and comparing an organisation's business processes against the business process of better performing companies to gain information which will help the organisation take action to improve its performance.
CAD	Computer aided design.
Call centre	Business unit where telephony activities are centralised, with the aim of cutting costs and improving marketing and/or customer services; it might be a distributed call centre based in several locations (even the employees' own houses) in different countries or continents.

CD-ROM (compact disc - read only memory)	Disc that stores vast amounts of electronic information to be read by a computer; these data may be in multimedia format
Chamber (of commerce/economy/industry)	A chamber of commerce is an association, usually at local or regional level, of firms involved in trade of every kind, often serving as intermediary bodies for the trade sector.
Chat	Enables people to conduct real-time conversations via text, with many people at the same time.
CNC	Computerised numerical control.
Coaching	A role in education and training, in which the coach enables the learner to identify and act to meet specific learning needs.
Competence-based (education, training & learning)	Education and training provision which is designed to enable learners to acquire, enhance and update their ability to meet the demands of specific occupations and work roles.
Computer-based training (CBT)	Generic term covering interactive training presented on the computer (CAI) and computer managed learning (CML). Interactive multimedia training is effectively CBT enhanced by the inclusion of multimedia. Web based training (WBT) is CBT delivered over the web.
Continuing (education & training)	Education and training which updates or enhances the knowledge and skills learned in basic education.
Core skills	Skills needed to remain employable, whatever one's occupation.
Course design	Plan for an education or training course so that it meets identified training needs.
Curriculum	Courses of study that are available for a specified group of learners.
Cybercafé	Café which provides a service to allow patrons to use computers and access the Internet.
Distance (learning & education)	Structured learning activities which take place away from an institutional centre of education and training.

Distance learning	Individualised study in which the learners work entirely away from an educational campus; contacts with tutors are usually by telephone or mail (including email).
Domotics	Domotics or smart home technology is the integration of services and technologies, applied to homes, flats, apartments, houses and small buildings with the purpose of automating them and obtaining an increase in safety and security, comfort, communication and technical management.
Dual system	System of training which combines formal education and training with work experience.
Educational needs	Education needed to meet the demands of an individual, organisation or national economy.
Employers' associations/organisations	Employers' associations are intermediary bodies to which firms belong in their capacity as employers and which represent the member firms in dealings with other employers' associations, or government, or trade unions, etc.
Enhance, upgrade skills	Actions through which specific skills are converted, enhanced and upgraded so that an individual may achieve the standards required for employment.
Expert system	Application of artificial intelligence principles where a computer program mimics the diagnostic abilities of a human expert by drawing on a set of rules and facts about the domain and by using an algorithmic approach to problems.
Facilitator	Actions by a teacher, trainer or other person which increase the ease with which something is learnt, or reduce the barriers to learning which a learner experiences.
Flexibility	Ability to change working practices and skills easily, and to adapt to the changing demands of the economy as they occur.
Group ware	Applications which allow people to share documents, etc., and work collaboratively over computer networks (e.g. Microsoft Outlook or Lotus Notes).
Internet	World-wide 'network of networks' used for email, web publishing and increasingly for broadcast and telephony.

Intranet	Network using Internet technologies for internal communication and work processes within an organisation.
Job profile	Set of functions and the competences required to undertake them, which is associated with a specific occupation.
Job rotation	Tool to promote both training and labour market activities. It provides employees with paid leave to participate in supplementary training, while they are replaced in their jobs by unemployed people, who in turn receive a period of on-the-job training.
Key skills	See 'Core Skills'.
Learning centre	Room that has been purpose-designed and specially equipped with a number of study positions where students can study open and distance learning packages in a good learning environment.
Learning organisation/company	Organisation that provides a conducive atmosphere for, and values, learning among the individuals who are part of it; it combines working and organisational learning.
Learning region	Regional actors use regional networks to improve the capabilities for action within the region, creating synergy between public and private sectors, using effective networking relationships between the firms and the supply chain, fostering innovation and diffusion of new and economically useful knowledge.
Lifelong learning	Policy which recognises that people continue to learn beyond their formative years, both within and outside formal education and training systems.
Management training	Training designed to develop and enhance managerial competence.
Mentor	Someone who guides, advises or counsels a learner.
Middle management	Layer in the management between the company top and the workers, e.g. foreman, supervisor, master mechanic, team leader.
Mobility	Labour market mobility is the extent to which people move, or are able or willing to move, from one job to another.

Multimedia	Combination of media types on a single document, including: text, graphics, animation, audio and video.
NetMeeting	Commercial software, delivers a complete Internet conferencing solution for all Windows users with multi-point data conferencing, text chat, whiteboard, and file transfer, as well as point-to-point audio and video.
Networking	Process of maintaining contact and exchanging information between stakeholders.
New basic skills	Skills required for active participation in the knowledge society and economy.
On the job training	Training carried in the individual's work setting, using the job as the medium for learning.
Online	Generic term to refer to files that may be found on the Internet, or on an intranet or to interactive processes that take place via this means.
Open learning	Method of learning that enables people to study at a time, place and/or pace which suits them best; it may involve self-study at home or work at convenient times supported by telephone tutorials and practical work; see also 'Distance learning'.
Organisational learning	Processes by which information about the effectiveness and sustainability of an organisation is gathered and used to maintain its viability.
Participation (in education & training)	Active involvement of the learner in the process of designing and delivering programmes and activities that meet specific learning objectives.
Peer evaluation	Assessment by colleagues that have not been involved in developing a programme.
Peer mentorship	Approach where people over 45, looking to renew their competences, are coached by their peers belonging to the same generation.
Portal	Entry point or starting site for Internet, combining a mixture of content and services and attempting to provide a personalised 'home base' for its audience.

Productivity	Measured as the amount of output produced by a given quantity of inputs.
Professional skills	Skills characteristic of activities in certain occupations, and which contribute to competence in those occupations.
Qualification	Requirements for an individual to enter or progress within an occupation, the educational and training experience and attainments of an individual or the official record of achievement which recognises successful completion of education or training, or satisfactory performance in a test or examination.
Recognition	Acceptance of the academic standards of an educational establishment by an outside accrediting agency.
Remote access	Refers to workers being able to access their organisation's network using ICT, from any or from a designated location.
Self-managed learning	When an individual sets their own learning objectives and decides how best to achieve them, they can be said to be managing their own learning.
Simulations games	Computer programs which simulate real or imaginary scenarios, used to simulate events that would normally be impossible, difficult or dangerous.
Skill, skills	Expertise needed to perform a task or do a job or the product of education, training and experience, which, together with relevant knowledge, is the characteristic of a competent worker.
Skilled occupation	Skilled workers undertake work which involves the application of knowledge in a broad range of varied work activities performed in a variety of contexts, most of which are complex and non-routine, involving considerable responsibility and autonomy.
Social economy	Model that reconciles the economic dimension (business efficiency) and the social dimension (solidarity) - also referred to as 'third sector', 'solidarity economy', 'alternative economy' or 'non-profit sector'.

Stakeholder	Any person, group of persons, or institutionwho has a substantive interest in the outcome of a decision is a stakeholder.
Synchronous communication	Method of communicating where those taking part are connected in real time while the communication is taking place (e.g. computer conferencing or video conferencing).
Telecentre	Local wired work centre with a variety of aliases: telecottage, electronic village hall, telebusiness centre.
Teleconferencing	Holding a 'virtual' conference with participants in different locations, either via telephone (audioconferencing) or video (videoconferencing).
Teleworking	Term describing any way of working at a distance using a combination of computers and telecommunications.
Training providers	Organisations and individuals whose business is to provide training.
Videoconferencing	Use of video links to enable two or more people to see and hear each other, and to have a 'meeting', when they are not in the same place.
Virtual campus	Part of a university or college that provides educational facilities at any time and potentially anywhere using computer conferencing and the Internet to support the students.
Virtual office	Office not existing in any particular location, but in the network.
Virtual team	Members of a team that may be based in variety of locations, in one or several organisations, rarely meeting but working collaboratively using electronic networks.
Voice recognition	Ability of a computer to analyse voice input. It is becoming increasingly practical to speak commands and dictate memos, letters, etc. to the computer.
Whiteboard	Software enabling people to collaborate in real time with others via graphic information.
Work organisation	Term used to describe the way in which tasks and responsibilities are allocated between workers within a company or department.

NB: In the compilation of this glossary, we made grateful use of the *Glossary of Labour Market Terms and Standard and Curriculum Development Terms*, European Training Foundation: Turin, 1997. For the computer-related terms, we found inspiration from many different sources on the Internet.

Annex 3 Suggestions for further reading

National publications on the ADAPT initiative

ADAPT Community Initiative, Directory of Greek projects, 1997-1999 / Ministry of Labour and Social Security, General Secretariat for Administration of Community Resources. Athens: Ministry of Labour and Social Security, 1999.

ADAPT e le nuove forme di organizzazione del lavoro / ISFOL. CD ROM. Rome: ISFOL, 2000.

ADAPT, Erfahrungen aus Modellprojekten: Arbeit und Umwelt / Nationale Unterstützungsstelle der Bundesanstalt für Arbeit. Bonn: Bundesanstalt für Arbeit, 2000.

ADAPT, Erfahrungen aus Modellprojekten: Arbeitszeit / Nationale Unterstützungsstelle der Bundesanstalt für Arbeit. Bonn: Bundesanstalt für Arbeit, 2000.

ADAPT, Erfahrungen aus Modellprojekten: Die Zukunft der Regionen / Nationale Unterstützungsstelle der Bundesanstalt für Arbeit. Bonn: Bundesanstalt für Arbeit, 2000.

ADAPT, Erfahrungen aus Modellprojekten: Druck & Medien/ Nationale Unterstützungsstelle der Bundesanstalt für Arbeit. Bonn: Bundesanstalt für Arbeit, 2000.

ADAPT, Erfahrungen aus Modellprojekten: Erfolg durch Zusammenarbeit / Nationale Unterstützungsstelle der Bundesanstalt für Arbeit. Bonn: Bundesanstalt für Arbeit, 2000.

ADAPT, Erfahrungen aus Modellprojekten: Kleinunternehmen / Nationale Unterstützungsstelle der Bundesanstalt für Arbeit. Bonn: Bundesanstalt für Arbeit, 2000.

ADAPT, Erfahrungen aus Modellprojekten: Lernen am Arbeitsplatz / Nationale Unterstützungsstelle der Bundesanstalt für Arbeit. Bonn: Bundesanstalt für Arbeit, 2000.

ADAPT, Erfahrungen aus Modellprojekten: Logistik / Nationale Unterstützungsstelle der Bundesanstalt für Arbeit. Bonn: Bundesanstalt für Arbeit, 2000.

ADAPT, Erfahrungen aus Modellprojekten: Neue Märkte / Nationale Unterstützungsstelle der Bundesanstalt für Arbeit. Bonn: Bundesanstalt für Arbeit, 2000.

ADAPT, Erfahrungen aus Modellprojekten: Transnationale Success-Stories / Nationale Unterstützungsstelle der Bundesanstalt für Arbeit. Bonn: Bundesanstalt für Arbeit, 2000.

Buenas Prácticas en Empleo y ADAPT / Comité de Seguimiento, Unidad administradora del Fondo Social Europeo. Ministerio de Trabajo y Asuntos Sociales. Madrid: Ministerio de Trabajo y Asuntos Sociales, 2000.

Change@work, results of ADAPT in Ireland / Leargas. Dublin: Leargas, 2000.

European Commission. *Memorandum on lifelong learning*. Brussels, 30.10.2000. SEC(2000) 1832.

Freudenthaler E.; Schmidt E. *New Jobs- Beschäftigungspotentiale und neue Qualifikationsprofile*. Vienna: Büro für Gemeinschaftsinitiativen und Programme der EU, 2000.

Gemeinschaftsinitiative ADAPT. *Dokumentation der österreichischen Projekte, 1 Antragsrunde 1995*. Vienna: gip-Büro für Gemeinschaftsinitiativen und Programme der EU, 1998.

Gemeinschaftsinitiative ADAPT. *Dokumentation der österreichischen Projekte, 2 Antragsrunde 1997*. Vienna: gip-Büro für Gemeinschaftsinitiativen und Programme der EU, 2000.

Iniciativa Comunitaria ADAPT, Catálogo de Productos, 1995-1997 / Estructura de Apoyo, Unidad administradora del Fondo Social Europeo. Madrid: Ministerio de Trabajo y Asuntos Sociales, 1999.

Iniciativa Comunitaria ADAPT, Directorio de Proyectos ADAPT, 1995-1997 / Estructura de Apoyo, Unidad administradora del Fondo Social Europeo. Madrid: Ministerio de Trabajo y Asuntos Sociales, 1997.

Iniciativa Comunitaria ADAPT, Directorio de Proyectos ADAPT, 1995-1998 / Estructura de Apoyo, Unidad administradora del Fondo Social Europeo, Madrid: Ministerio de Trabajo y Asuntos Sociales, 1999.

Initiative Communautaire ADAPT, Catalogue des Produits 1995-1998 / Structure d'Appui Belgique Francophone et Germanophone. Brussels: Cellule Fonds social européen de la Région wallonne, de la Communauté française et de la Commission communautaire française, 1998.

Il lavoro che cambia, Le nuove forme di organizzazione del lavore nell'esperienza ADAPT / ISFOL/ Rome: ISFOL 2000.

Menselijke hulpbronnen in Vlaanderen, Compendium van het Communautair Initiatief ADAPT / EWBL. Ministerie van de Vlaamse Gemeenschap, Departement E.W.B.L. Brussels: Administratie Werkgelegenheid, 2000.

Nouvelles formes et nouveaux contenus de la formation / Racine. Paris: Racine 2000.

Les PME et l'Europe de la formation / Racine. Paris: Racine, cahier, 1998.

Projectenbundel, projectgegevens 1997-1999 / BUESI. Den Haag: Ministerie van Sociale Zaken en Werkgelegenheid, 1999.

Quattro & ADAPT. Projekte und Ergebnisse / Gesellschaft für innovative Beschäftigungsförderung. Bottrop: Gesellschaft für innovative Beschäftigungsförderung GmbH., 1999.

RicercAdapt: le pubblicazioni / ISFOL. CD ROM. Rome: ISFOL, 2000.

Le Travail du Futur, le Futur du Travail / Racine. Paris: Racine, 2000.

Uno Sguardo su ADAPT / ISFOL. CD ROM. Rome: ISFOL, 2000.

Verslag Adapt-Conferentie 'Experientia Docet' / BUESI. Den Haag: Ministerie van Sociale Zaken en Werkgelegenheid, 2000.

Selected publications from ADAPT promoters

Baglin, G.; Capraro, M. *Lean Services. Une démarche de compétitivité des PME de services.* Lyon: Presses Universitaires de Lyon, 2000.

Baglin, G.; Capraro, M. *L'entreprise Lean production ou la PME competitive par l'action collective.* Lyon: Presses Universitaires de Lyon, 2000.

Centre INFFO. *Internet: nouveaux horizons pour la formation.* Dossier documentaire. Paris: Centre INFFO, 2000.

De Coninck, P (ed.). *Management of competences on the labour market. Basic principles and challenge.* Antwerp: UIA, 2000.

Drijkoningen, C.; Delanote, L.; Van de poel, D. *Slapende vermogens werken niet. HRM: ook voor uitvoerenden.* Leuven: ACCO, 2000.

Geldermann, G. et al. *Company networks by means of New Learning.* Nürnberg: Training and Development Centres of the Bavarian Business (bfz), 2000.

Guide méthodologique. Implanter et faire vivre des Équipes Autonomes / CEDOP. CD-ROM. Paris: CEDOP FORMATION, 2001.

Krenn, M. et al. *Wissen für die technisierte Arbeitswelt – erfahrungsgeleitetes Arbeiten als Erfolgsfaktor.* Hamburg: Verlag Dr. Kovač, 2000. (Socialia nr 43).

Netting the mackerel – experiences in competence development in regional networks / Køge Business College. Køge: Køge Business College, November 1999.

New Book Economy. *Die Buchbranche in der Informationsgesellschaft: Neue Tätigkeitsprofile und Qualifikationsbedarf für Beschäftigte in Verlagen, Buchhandlungen und Bibliotheken.* Berlin: Internationale Buchagentur, 1999.

New Book Economy. *Die Buchbranche in der Informationsgesellschaft: Nutzeranforderungen an elektronische Medien in Verlagen, Buchhandlungen und Bibliotheken.* Berlin, Internationale Buchagentur, 1999.

Scheff, J. *Learning Regions. Regional Networks as an answer to Global Challenges.* Frankfurt am Main: Peter Lang GmbH, Europäischer Verlag der Wissenschaften, 2001. Original in German: Vienna: Linde Verlag GmbH, 1999.

Strauß, J.; Krenn, M. *Working with head and heart. Experience-based Working and Learning in Industry.* EKATOP Transnational Project Report. Dortmund: Sozialforschungsstelle/Vienna: Forschungs-und Beratungsstelle Arbeitswelt, 2000.

Svensson A.; Svensson, B. *The quartet. A model for life-long learning.* Stockholm: Svensson & Svensson A.B., 2000.

Annex 4 Contact information for selected ADAPT projects

Legend: ✧ ADAPT project mentioned in this report

* Full description of ADAPT project available in the database on Cedefop's website: http://www.trainingvillage.gr/

	ADAPT project	Country	Institution/organisation	Contact person
✧ *	45+	Finland	Adulta, Keski-Uusimaa Adult Education Centre Postikatu 10 FIN - 04400 Jarvenpaa	Ms Marjukka Rehumaki (+358 9) 2719 0241 rehma@kuakk.fi
✧ *	Adastra	Denmark	Køge Business College Lyngvej 19 DK - 4600 Køge	Ms Monica Engberg (+45 56) 670400 khs@adm.khs.dk
✧ *	Age conscious training policy (45+)	Belgium	UIA-Universitaire Instelling Antwerpen Universiteitsplein 1 - P/A UIA R314 B - 2600 Wilrijk	Ms Paulette De Coninck (+33 3) 820 29 35 Paulette.DeConinck@uia.ua.ac.be
✧ *	Autoform - *Apprendre à utiliser les technologies et à organiser la formation ouverte et à distance*	France	CESI 297 Rue De Vaugirard F - 75015 Paris	Mr Bernard Blandin (+33 14) 419 23 45 bblandin@cesi.fr
✧ *	*Arbeit in der automatisierten Produktion* (Work in automated production)	Austria	FORBA - Forschungs- und Beratungsstelle Arbeitswelt Aspernbruckengasse 4/5 A - 1020 Wien	Mr Manfred Krenn (+43 121) 247 0073 krenn@forba.at
✧ *	Basic skills improvement	United Kingdom	The Basic Skills Agency Commonwealth House - 1-19 New Oxford Street London W1A 1NU United Kingdom	Mr Alan Wells (+44 171) 405 4017 jmp@basic-skills.co.uk
✧ *	BRISA	Spain	EATUR Desarrollo Rural SL Paseo De Rosales 26 Esc 4 1 E - 50008 Zaragoza	Mr Juan Manuel Alvarez Lopez (+34 9) 76 595191 director@eatur.com
✧ *	Business networking for the transfer of best practices in work organisation and integration of new technologies	Greece	FANCO AE Jisimopoulou & Pentelis 34 GR - 17564 Athens	Ms Maria Alexiou (+30 1) 9307307 malexiou@mail.hol.gr

✧ ADAPT project mentioned in this report • Full description of ADAPT project available in the database on Cedefop's website: http://www.trainingvillage.gr/

	ADAPT project	Country	Institution/organisation	Contact person
✧ •	*Caprimova - Desenvolvimento agro-industrial da fileira Caprina Columella*	Portugal	IDARC - Instituto Para O Desenvolvimento Agrario Da Regiao Centro Rua Infanta D. Maria, Bloco 5 - R/C P - 3030 Coimbra	Mr António Santos Veloso (+351 39) 802 160 idarcentro@mail.telepac.pt
✧ •	Clothild (training for the clothing industry in local and delocalised settings)	Belgium	VDAB Vlaamse dienst voor arbeidsbemiddeling en beroepsopleiding Keizerslaan 11 B - 1000 Brussel	Mr Eric Cooman (+32 2) 5060463 adlatte@vdab.be
✧ •	*Cluster Net:*	Austria	Technikum Joanneum GMBH (Graz) Alte Poststraße 149 A - 8020 Graz	Ms Anni Koubek (+43 316) 876 8412 koubek@fh-joanneum.at
✧ •	Cocotel - *Kooperation und Kommunikation durch Telecooking und Vernetzung* (Cooperation and communication via telework and networking)	Germany	QUMSULT GmbH Eisenbahnstr. 41 D - 79098 Freiburg	Mr Sauer (+49 761) 29286-14 sauer@qumsult.de
✧ •	CRETA	Portugal	CGTP-IN (Confederação Geral Dos Trabalhadores Portugueses - Intersindical Nacional) Rua Victor Cordon 1-2 P - 1249 Lisboa	MS Maria Augusta Sousa (+351 1) 323 65 00 cgtp@mail.telepac.pt
✧ •	Delphi - Integrated programme for the introduction of new production technologies	Greece	Greek Center Of Alumnamass G Lira 55 GR - 145 64 Athens	Ms Katerina Kokla (+30 1) 8074201 kokla@commex.gr
✧ •	*Developmet Veneto - Sviluppo delle capacita' competitive ed occupazionali delle PMI*	Italy	SIAV - Servizi Alle Imprese Agenzia Veneta SRL Corso Del Popolo, 146/C I - 30170 Mestre	Ms Gabriela Bettio (+39 041) 940940 info@siav.net
✧ •	Direct (distributors and retailers course targeting)	United Kingdom	Southampton Institute Cecomm - East Park Terrace Southampton ME9 8PX United Kingdom	Mr Stephen Fry (+44 23803) 19 21 44 stephen.fry@frysamuels.com

✧ ADAPT project mentioned in this report. ★ Full description of ADAPT project available in the database on Cedefop's website: http://www.trainingvillage.gr/

	ADAPT project	Country	Institution/organisation	Contact person
✧ ★	DO (to enhance capabilities to develop operations in SMEs)	Italy	Fondazione CUOA/ Centro Universitario di Organizzazione Azendiale Via Marconi 103 I - 36100 Altavilla Vicentina	Mr Roberto Filippini (+39 444) 998 730 filippini@gest.unipd.it
✧ ★	Dolores (Dortmund logistics review and education system)	Germany	Dortmund University Emil-Figge-Strasse 73 D - 44221 Dortmund	Dr Dirk Jodin (+49 231) 755 2099 dolores@flw.mb.uni-dortmund.de
✧ ★	Duty Calls	United Kingdom	The Learning and Business Link Company Limited Sittingbourne Research Centre The Observatory, 1050 Cornforth Drive Sittingbourne ME19 4AE United Kingdom	Mr Ian White (+44 1795) 471468 ian@lbointernational.com
✧ ★	ELAN - European local area network	Denmark	AMU-Center Randers Blommevej 40 DK - 8900 Randers	Ms Judy Olsen (+45 87) 106229 jol@amu-randers.dk
✧ ★	Enterprise of the learning organisation in the Apulian SMEs	Italy	Sud Sistemi Via Napoli 329/E I - 70123 Bari	Mr Antonio Massari (+39 080) 5746962 a.massari@haroldnet.org
✧ ★	Equate (educational qualifications and accreditation tuned to enterprise needs)	Ireland	Cork Regional Technical College Rossa Avenue, Bishopstown, Cork Cork Ireland	Mr Ray Coughlan (+353 21) 4921181 rcoughlan@cit.ie
✧ ★	*Equipes autonomes : innovation organisationnelle et préservation de l'emploi* (Autonomous teams: organisational innovation and preservation of employment)	France	Cedop Formation 2 Rue De Penthièvre F - 75008 Paris	Mr Marcel Misrahi (+33 1) 42664514 misrahi.cedop@wanadoo.fr

✧ ADAPT project mentioned in this report. ★ Full description of ADAPT project available in the database on Cedefop's website: http://www.trainingvillage.gr/

	ADAPT project	Country	Institution/organisation	Contact person
✧ ★	EU JobRotation - A new track in Europe	Italy	Arcidonna Via Alessio Di Giovanni, 14 I - 90144 Palermo	Ms Roberta Messina (+39 091) 344 403
✧ ★	HEP Construnet	France	Eiffage Construction - Direct. Rh - Tour Morane - BP 46 3, Ave. Morane - Saulnier F - 78141 Velizy - Villacoublay	Mr Daniel Villedieu (+33 1) 34 65 89 89 dvilledieu@eiffageconstruction.fr
✧ ★	*Forma PYME* (Train SMEs)	Spain	PIME Menorca C/ Curniola,17 E - 07714 Mahon (Menorca)	Mr Pablo Segui Pons (+34 9) 71 352464 correo@pimemenorca.org
✧ ★	*Formateurs et technologie* (Trainers and technology)	France	Algora - Formation Ouverte Et Réseaux Immeuble Evolution 18/26 Rue Goubet F - 75 959 Paris Cedex 19	Mr Philippe Morin (+33 1) 4803 90 00 pmorin@oravep.org
★	*Human resources management voor Laaggekwalificeerde Werknemers* (Human resources management for operators)	Belgium	Vitamine W Biekorfstraat 20-24 B - 2060 Antwerpen	Ms Liliane Delanote (+32 3) 2056300 liliane.delanote@vitamine-w.be
✧ ★	Informa XXI	Spain	Asalma/UCMTA Jardines 15 /Valverde 13 E - 28013 Madrid	Mr Julián Menendez (+34 1) 5221533 asalma@retemail.es
✧ ★	Infosys - *Auswirkungen der Informationsverarbeitung und beruflichen Weiterbildung - Schlussfolgerungen für die Ausbildung von Teletutoren*	Germany	Institut Für Strukturpolitik Und Wirtschaftsforderung (ISW) Magdeburger Strasse 23 D - 06108 Halle / Saale	Ms Henriette Freikamp (+49 34) 52935811 isw.Halle.Bildung@t-online.de
✧ ★	Info-Tecno-Movil	Spain	Fundacion San Valero Violeta Parra 9 E - 50015 Zaragoza	Mr Cesar Romero (+34 976) 466 599 cromero@svalero.es
✧ ★	Internet: *nouveaux horizons pour la formation* (Internet: new horizons for training)	France	Centre Inffo Tour Europe F - 92049 Paris-La-Defense Cedex	Mme Valérie Hellouin (+33 1) 41 25 22 68 ciobs@centre-inffo.fr

✧ ADAPT project mentioned in this report ★ Full description of ADAPT project available in the database on Cedefop's website - http://www.trainingvillage.gr/

	ADAPT project	Country	Institution/organisation	Contact person
✧ ★	Jobrotation	Germany	SPI Servicegesellschaft MBH Boppstrasse 10 D - 10967 Berlin	Ms Birgit Gericke (+49 30) 6900850 birgit.gericke@spisg.de
✧ ★	ITE-Skills	Sweden	Innovationscentrum MTO, Malardalens Högskola Drottninggatan 16 A, Box 325 S - 63105 Eskilstuna	Ms Annika Lantz (+46 016) 15 36 00 annika.lantz@mdh.se
✧ ★	Lean production	France	Ceforalp 66, Avenue Jean Mermoz - B.P. 8048 F - 69351 Lyon Cedex 08	Mr Mario Capraro (+33 4) 78 77 05 55 info@ceforalp
✧ ★	Learning enterprises by local, regional and international networking	Sweden	Industriellt Utvecklingscentrum I Gnosjo AB Hellmansgatan 8 S - 335 22 Gnosjo	Mr Bo Willermark (+46 370) 331750 bo.willermark@iuc.gnosjoregionen.nu
★	Learning for change	Sweden	Linkopings Kommun S - 581 81 Linkoping	Ms Anette Svensson (+46 8) 545005S5 ab@svenssonsvensson.se
✧ ★	(Learning Region Graz) Profilierung des Grossraumes Graz zur 'Lernenden Region'	Austria	Universitat Graz - Inst. Fur BWL Der Off. Verwaltung Und Verwaltungswirtschaft Universitatsstraße 15/E4 A - 8010 Graz	Mr Josef Scheff (+43 316) 380 7183 josef.scheff@kfunigraz.ac.at
✧	Learning to keep ahead of change	Ireland	Arthur Guinness Son & Co (Dublin) LTD St. James's Gate Dublin Ireland	Mr John Findlater (+353 1) 453 67 00 john.findlater@guinness.com
✧ ★	Marchmont Observatory	United Kingdom	University of Exeter St Lukes Heavitree Road Exeter EX1 2LU United Kingdom	Mr Ben Neild (+44 1392) 264 823 b.neild@exeter.ac.uk

✧ ADAPT project mentioned in this report ★ Full description of ADAPT project available in the database on Cedefop's website: http://www.trainingvillage.gr/

	ADAPT project	Country	Institution/organisation	Contact person
✧ ★	METRO - Making employment the real objective	United Kingdom	Bishop Auckland College Woodhouse Lane Durham DL14 6JZ United Kingdom	Mr T. Farrier (+44 1207) 218112 dri@bacoll.ac.uk
✧ ★	Minerva - *Handwerkstrauen im Lern- und Kooperationsverband*	Germany	GIP - Gesellschaft Fur Informationstechnologie Und Padagogik Am Imbse Homberger Str. 74B D - 47441 Moers	Ms Martina Reinicke-Reichelt (+49 28) 41900311 Martina.Reichelt@gip-am-imbse.de
✧ ★	Nettex A - *Wachstum und Standortsicherung/Regionale Netzwerke/ in der Textilbranche*	Germany	Bildungswerk Der Sachsischen Wirtschaft EV Obere Turmstrasse 8 D - 90429 Nurnberg	Ms Brit Uschner (+49 911) 27958-16 uschner.brit@bf.bfz.de
✧ ★	New book economy - Building the information society (NBE-BIS)	Germany	IBA - Internationale Medien und Buch Agentur Postfach 550 142 D - 10371 Berlin	Mr Schmidt-Braul (+49 30) 4437 9155 office@iba-berlin.de
✧ ★	*Noordkop naar de top* (Noordkop to the top)	The Netherlands	Syntens Alkmaar Postbus 3083 1801GB Alkmaar The Netherlands	Ms Annoesjka Nienhuis (+31 72) 511 85 85 ann@syntens.nl
✧ ★	Pegaso (*Programa de empleo para la gestion de la adaptacion en sectores*)	Spain	Mancomunidade de la area intermunicipal de Vigo Avda. Hispanidad 17 E - 36203 Vigo (Pontevedra)	Mr Antonio de la Cruz (+34 9) 86423366 antonio.delacruz@mav.org
✧ ★	Peovilu (*Personal- und Organisations-entwicklung im virtuellen Unternehmen*)	Germany	Fraunhofer Institut fur Arbeitswirtschaft und Organisation Nobelstr. 12 D - 70569 Stuttgart	Dr Martin Rieger (+49 71) 19 70 20 25 martin.rieger@iao.fhg.de
✧ ★	Quasys	Italy	Cisita Formazione Superiore Via Biaggini 39 I - 19032 Lerici (SP)	Ms Giuliana Luccarelli (+39 0187) 970577 cisita@cisita.sp.it
✧ ★	Reading and writing	Denmark	AOF Danmark Teglværksgade 27 DK - 2100 København	Mr Lars Pedersen (+45 39) 29 60 66 larsp@aof-danmark.dk

✧ ADAPT project mentioned in this report ★ Full description of ADAPT project available in the database on Cedefop's website: http://www.trainingvillage.gr/

	ADAPT project	Country	Institution/organisation	Contact person
✧ ★	Reading and writing in the information society	The Netherlands	Dudok Regio College Arena 301 1213NW Hilversum The Netherlands	Ms Marian Markenhof (+31 35) 689 20 00 M.Markenhof@dudokcollege.nl
✧ ★	*Regiones BIS*	Belgium	IFPME Avenue Des Arts 39 B - 1040 Bruxelles	Mme Evelyne Bidault (+32 2) 502 76 00 evelyne.bidault@ifpme.be
✧ ★	Self-managed development in flat organisations - 'Career' 2000	Ireland	Aughinish Alumina Limited Aughinish Island, Askeaton, Co. Limerick Limerick Ireland	Mr Nelius Kennedy (+353) 61 604000 avril.glynn@augh.com
✧ ★	*Sentieri di carriera per il personale produttivo, sviluppo e certificazione delle competenze alla parmalat* (Career progress for production personnel, development and certification of competence at Parmalat)	Italy	Parmalat Spa Via O.Grassi, 22/26 I - 43044 Collecchio	Andrea Bergonzi (+39 052) 18081 andrea_bergonzi@parmalat.net
✧ ★	SMEs Gain	United Kingdom	College Of Building & Printing 60 North Hanover Street Glasgow G1 2BP United Kingdom	Mr Robert M. Maguire (+44 141) 357 6102 r.maguire@adapt.gtn.org.uk
✧ ★	Teamspirit	Belgium	Volkswagen Brussel Tweede Britse Legerlaan 201 B - 1190 Brussel	Mr Stefaan Watte (+32 2) 348 26 10 pub02182@innet.be
✧ ★	Tele-learn - *Entwicklung einer Internet-basierten Tele-Lernumgebung*	Germany	Akademie Für Neue Medien GmbH Konigsallee 37 D - 71638 Ludwigsburg	Mr Roland Berroth (+49 71) 41975790 berroth@afnm.de

✧ ADAPT project mentioned in this report ★ Full description of ADAPT project available in the database on Cedefop's website - http://www.trainingvillage.gr/

	ADAPT project	Country	Institution/organisation	Contact person
✧ ★	TIDE (*Technologie de l'information et développement de l'emploi* - Information technology and job development)	France	Air France Rue De Paris 45 F - 95747 Roissy CDG Cedex	Mr Alain Dupeyron (+33 1) 46 75 19 44 aldupeyron@airfrance.fr
✧ ★	Trainers network	Ireland	FAS – The Irish training and employment authority 27-33 Upper Baggot St Dublin 4 Ireland	Mr Brendan Harpur (+353 1) 607 0736 Brendan Harpur@fas.ie
★	Transform	Portugal	Unefor R. De Espinho, 25 P - 3810 Aveiro	Mr José Ferrao Ferreira (+351 234) 426 410 ferrao@unefor.ua.pt
✧ ★	Ulysses	Spain	COEBA (Confederacion De Organizaciones Empresariales De Badajoz) Cardenal Carvajal 4 E - 06001 Badajoz	Mr Jose Maria Reino Amador (+34 24) 258011 info@coeba.es
✧ ★	Upbeat (Urban partnership Barnet and Enfield ADAPT towncentre)	United Kingdom	Barnet College Wood Street Barnet London EN5 4AZ United Kingdom	Mr Dave Tabernacle (+44 20) 82008300 dave.tabernacle@barnet.ac.uk
✧	WIR (*Wesentliche Ideen realisieren*)	Germany	GiMA – Gesellschaft für integrierte Management-Ausbildung mbH Auf Bollen 17/1 D - 72336 Balingen	Mr Miez-Mangold (+49 7433) 907410 info@planspiel

Cedefop (European Centre for the Development of Vocational Training)

Innovations in lifelong learning: Capitalising on ADAPT

Jos Janssens

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At the end of the ADAPT Community Initiative on workforce adaptation and industrial change, Cedefop commissioned this report to analyse projects which illustrate good practice in lifelong learning.

The projects demonstrate that learning at the workplace is not restricted to the act of learning itself, but that it also supports innovation and change processes in the company, and helps to solve recurrent problems in the production process or work organisation. They focus on the demand side, placing the customers are at the forefront. In a company, learning is no longer a stand-alone activity for trainers and teachers, but a common task for the workforce, management and human resource practitioners. Partnership is emphasised throughout. Many projects resulted in successful transnational partnerships, or developed effective learning regions.

The report is structured around the six key messages of the European Commission's *Memorandum on lifelong learning*. The projects provide many practice-oriented answers to questions posed in the memorandum.

Innovations in lifelong learning

Capitalising on ADAPT

PANORAM

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